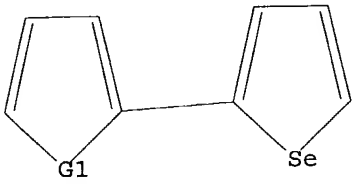
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

Broad search

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



G1 Se,O,S,N,NH

Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 14:54:13 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 40 TO ITERATE

100.0% PROCESSED 40 ITERATIONS 5 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 421 TO 1179
PROJECTED ANSWERS: 5 TO 234

L2 5 SEA SSS SAM L1

=> s l1 sss full
FULL SEARCH INITIATED 14:54:20 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 761 TO ITERATE

100.0% PROCESSED 761 ITERATIONS 133 ANSWERS
SEARCH TIME: 00.00.01

L3 133 SEA SSS FUL L1

=> fila caplus
FILA IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	155.42	155.63

FILE 'CAPLUS' ENTERED AT 14:54:43 ON 17 JUN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 17 Jun 2004 VOL 140 ISS 25
FILE LAST UPDATED: 16 Jun 2004 (20040616/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3
L4 60 L3

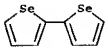
=> d ibib abs hitstr tot

L4 ANSWER 1 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:644758 CAPLUS
DOCUMENT NUMBER: 139:365349
TITLE: Synthesis, characterization and electrochemical properties of polybiselenophene
AUTHOR(S): Ong, Teng-Teng; Ng, Siu-Choon; Chan, Hardy S. O.
CORPORATE SOURCE: Department of Chemistry, National University of Singapore, Singapore, Singapore
SOURCE: Polymer (2003), 44(19), 5597-5603
CODEN: POLMAG; ISSN: 0032-3861
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A novel elec. conducting polymer consisting of selenophene moiety, poly(biselenophene) (PBSE) was generated by chemical and electrochem. polymerization
This polymer gave lower bandgap energy (1.9 eV) than pristine polyselenophene (2.0 eV). The electrochem. and optical properties of PBSE
was investigated by UV-Vis near IR spectroscopy and electrochem. In situ electrochem. doping studies of PBSE showed the formation of polaron states
at 1.4 and 0.8 eV. Through cyclic voltammetry, the polymer oxidation potential (Epa) and reduction potential (Epc) for p-doping process for PBSE
were observed at 0.93 and 0.86 V, resp., at a scan rate of 20 mV s-1. Upon
chemical doping using chemical reagents such as iodine and ferric chloride, a
maximum conductivity of 0.1 S cm-1 was achieved.

IT **6239-48-1P**, 2,2'-Biselenophene
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(monomer; synthesis and characterization and electrochem. properties of
polybiselenophene)

RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



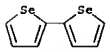
IT **95831-28-0P**
RL: MOA (Modifier or additive use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(synthesis and characterization and electrochem. properties of polybiselenophene)

RN 95831-28-0 CAPLUS
CN 2,2'-Biselenophene, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 6239-48-1

L4 ANSWER 1 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CMF C8 H6 Se2



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

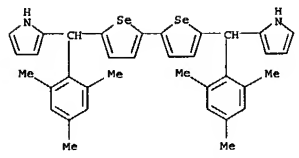
L4 ANSWER 2 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:453594 CAPLUS
DOCUMENT NUMBER: 139:245994
TITLE: meso-substituted aromatic 34π core-modified octaphyrins: Syntheses, characterization and anion binding properties
AUTHOR(S): Anand, Venkataramanarao G.; Venkatraman, Sundararaman;
Rath, Harapriya; Chandrashekar, Tavarekere K.; Teng, Weijie; Ruhlandt-Senge, Karin
CORPORATE SOURCE: Department of Chemistry, Indian Institute of Technology, Kanpur, 208016, India
SOURCE: Chemistry--A European Journal (2003), 9(10), 2282-2290
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:245994

AB Modified octaphyrins with 34π electrons have been synthesized and characterized following a simple synthetic methodol. An acid-catalyzed α,α coupling of tetrapyrranes containing furan, thiophene and selenophene rings resulted in the formation of the resp. octaphyrins in relatively good yield. Solution studies by 1H NMR and 2D NMR methods and single crystal X-ray structural characterization reveal an almost flat structure with two heterocyclic rings inverted. Specifically, in on product two selenophene rings (one on each biselenophene unit) are inverted while in another product two furan rings (one on each bifuran unit) are inverted when the meso substituent are mesityl groups. On changing the mesityl substituent to m-xylyl group in one of the compound, the location of ring inversion shifts to pyrrole rings (one on each bipyrrole unit) indicating the dependence of structure on the meso substituents. UV/Vis studies, both in free base and protonated forms reveal typical porphyrinic character and the aromatic nature of the octaphyrins. The ΔδS values evaluated by 1H NMR spectroscopy also support their aromatic nature. The protonated forms of octaphyrins bind
TFA anion in a 1:2 ratio. The TFA anions are located one above and below the plane of the octaphyrin macrocycle and they are held by weak electrostatic N-H-O interactions similar to that observed for protonated rubyrins. However, in the present case, there is an addnl. non-electrostatic C-H-O interaction involving β-CH of the inverted heterocyclic ring and the carbonyl oxygen of the TFA. Furthermore, inter mol. interactions between the C-H of the meso-mesityl group and the fluorine of CF3 group of bound TFA leads to the formation of one-dimensional supramol. arrays with interplanar distance of 13 Å between two octaphyrins.

IT **365279-93-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation, structure, and anion binding property of meso-substituted
aromatic 34π core-modified octaphyrins from acid-catalyzed coupling of
furan-, thiophene- or selenophene-containing tetrapyrranes)

RN 365279-93-2 CAPLUS
CN 1H-Pyrrole, 2,2'-[[2,2'-biselenophene]-5,5'-diylbis[(2,4,6-trimethylphenyl)methylene]]bis- (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

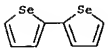


REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

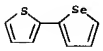
L4 ANSWER 3 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:173091 CAPLUS
DOCUMENT NUMBER: 138:228360
TITLE: Method of manufacturing a structured conducting polymer layer
INVENTOR(S): Becker, Eike; Johannes, Hans-Hermann; Kowalsky, Wolfgang
PATENT ASSIGNEE(S): Technische Universitaet Braunschweig, Germany
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1289031	A2	20030305	EP 2002-400038	20020821
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
DE 10140666	A1	20030313	DE 2001-10140666	20010824
DE 10140666	C2	20030821		
US 2003052015	A1	20030320	US 2002-225054	20020821

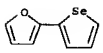
PRIORITY APPLN. INFO.: DE 2001-10140666 A 20010824
AB A procedure is described for the production of a conducting structured polymer film using two-layered anode for the electrochem. polymerization The lower layer consists of a non-conducting material, on which a conductive electrode layer is applied with a specified structure corresponding to the structure of the structured polymer films. The anode with a platinum cathode are in electrolytes, into which low mol. compds. are introduced, preferably monomers of the polymer film which can be formed. The current flows between the anode and the cathode in electrolyte solns. The structured polymer film is formed on a non-conductive substrate layer. The electrode will not damaged and can be used again for the new structured polymer film. In this way conductive structured polymer films could be manufactured in mass production
IT **6239-48-1**, 2,2'-Biselenophene **119507-82-3** **130236-56-5** **146580-93-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(method of manufacturing a structured conducting polymer layer by electrochem. polymerization of monomers)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



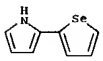
L4 ANSWER 3 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 119507-82-3 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)



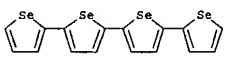
RN 130236-56-5 CAPLUS
CN Furan, 2-selenophene-2-yl- (9CI) (CA INDEX NAME)



RN 146580-93-0 CAPLUS
CN 1H-Pyrrole, 2-selenophene-2-yl- (9CI) (CA INDEX NAME)



L4 ANSWER 4 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:931889 CAPLUS
DOCUMENT NUMBER: 138:129549
TITLE: Organic Field-Effect Transistor Using Oligoselenophene as an Active Layer
AUTHOR(S): Kunugi, Yoshihito; Takimiya, Kazuo; Yamane, Kiwamu; Yamashita, Kazuo; Aso, Yoshio; Otsubo, Tetsuo
CORPORATE SOURCE: Faculty of Integrated Arts and Sciences, Hiroshima University, Higashi-Hiroshima, 739-8521, Japan
SOURCE: Chemistry of Materials (2003), 15(1), 6-7
CODEN: CMATEX; ISSN: 0897-4756
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A 2,2':5',2'':5'',2'''-quaterselenophene-based organic FET, showing good FET behavior, is reported. A 50-nm thick film of selenophene was vacuum-deposited onto the Si/SiO2 substrate. The transistor showed p-channel characteristics. The best mobility 3.6+10-3 cm2V-1s-1 was obtained for the oligoselenophene film prepared at a substrate temperature 60°C.
IT **188905-11-5**, 2,2':5',2'':5'',2'''-Quaterselenophene
RL: DEV (Device component use); USES (Uses)
(organic FET using oligoselenophene as active layer)
RN 188905-11-5 CAPLUS
CN 2,2':5',2'':5'',2'''-Quaterselenophene (9CI) (CA INDEX NAME)



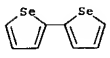
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:509543 CAPLUS
DOCUMENT NUMBER: 137:247536
TITLE: 30π Aromatic Meso-Substituted Heptaphyrin Isomers: Syntheses, Characterization, and Spectroscopic Studies
AUTHOR(S): Anand, Venkataramanarao G.; Pushpan, Simi K.; Venkatraman, S.; Narayanan, Seenichamy Jeyaprakash; Dey, Abhishek; Chandrashekar, Tavarekere K.; Roy, Raja; Joshi, Bhavani S.; Deepa, S.; Sastry, G. Narahari
CORPORATE SOURCE: Department of Chemistry, Indian Institute of Technology, Kanpur, India
SOURCE: Journal of Organic Chemistry (2002), 67(18), 6309-6319
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:247536
GI

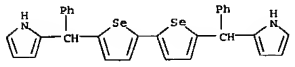
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The syntheses of new aromatic 30π heptaphyrins either through a [5 + 2] or a [4 + 3] acid-catalyzed condensation and oxidative coupling reactions of easily available and air-stable precursors are reported. The methodol. followed is not only simple and efficient but also allows synthesis of a range of heptaphyrins with different heteroatoms in the core. The oxidative coupling reactions of modified tripyrranes I and tetrapyrranes II were found to be dependent on the acid concentration used and as well as the substituents present on the meso position. The change of meso aryl substituents in I and II to meso mesityl substituents gave a new heptaphyrin III. The structural characterization has been done with extensive 1H and 2D NMR studies. The heptaphyrins reported here show rich structural diversity when the connections of the heterocyclic rings are altered, and accordingly, one ring and two ring inversions have been observed By a judicious choice of the precursors it has been possible to control the site of ring inversion either in the bithiophene unit or in the tripyrrane unit. Theor. calcns. performed on three different heptaphyrins also reveal that the inverted structures are .apprx.35-40 kJ lower in energy relative to the corresponding non-inverted structures. Furthermore, one of the heptaphyrins IV shows the presence of two conformers in solution in the ratio 1:2 and no interconversion between the conformers have been observed in the temperature range of 343-228 K. On protonation, the aromaticity and the ring inversions are retained and the Δδ values vary in the range 10.07-20.59 ppm. The energies of the Soret maxima and the HOMO-LUMO gap vary linearly with the increase in π electrons further justifying the aromatic nature of the heptaphyrins.
IT **6239-48-1**, 2,2'-Biselenophene **314725-87-6**
RL: RCT (Reactant); RACT (Reactant or reagent)

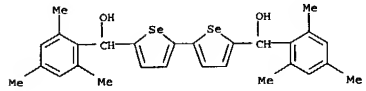
L4 ANSWER 5 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(syntheses, characterization, and spectroscopic studies of 30π arom. meso-substituted heptaphyrin isomers)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 314725-87-6 CAPLUS
CN 1H-Pyrrole, 2,2'-[[2,2'-biselenophene]-5,5'-diylbis(phenylmethylene)]bis- (9CI) (CA INDEX NAME)

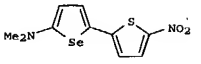


IT **460753-72-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(syntheses, characterization, and spectroscopic studies of 30π aromatic meso-substituted heptaphyrin isomers)
RN 460753-72-4 CAPLUS
CN [2,2'-Biselenophene]-5,5'-dimethanol, α,α'-bis(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



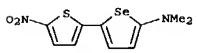
REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L4 ANSWER 6 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:439813 CAPLUS
DOCUMENT NUMBER: 137:310772
TITLE: Preparation and characterization of several new N-disubstituted 2-aminoselenophene derivatives
AUTHOR(S): Zug, Ines; Hartmann, Horst
CORPORATE SOURCE: Dept. of Chemistry, Univ. of Applied Sciences, Merseburg, D-06217, Germany
SOURCE: Zeitschrift fuer Naturforschung, B: Chemical Sciences (2002), 57(4), 420-426
CODEN: ZNBSEN; ISSN: 0932-0776
PUBLISHER: Verlag der Zeitschrift fuer Naturforschung
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



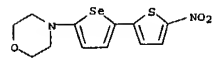
I

AB N,N'-Per-substituted seleno-acrylamides, easily available by reaction of 1-chlorovinamidinium salts with sodium selenide, were transformed by cyclocondensation reaction of acceptor-substituted halomethyl compds. into new 2-aminoselenophene derivs., e.g. I. Their UV/vis data are presented, and the pos. solvatochromism of 2-amino-5-acceptor-substituted selenophenes is reported.
IT **263265-45-8P 263265-47-0P 473287-32-0P 473287-33-1P 473287-34-2P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and characterization of several new N-disubstituted 2-aminoselenophene derivs. via cyclocondensation of selenoacrylamides with halomethyl compds.)
RN 263265-45-8 CAPLUS
CN 2-Selenophenamine, N,N-dimethyl-5-(5-nitro-2-thienyl)- (9CI) (CA INDEX NAME)

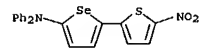


RN 263265-47-0 CAPLUS
CN Morpholine, 4-[5-(5-nitro-2-thienyl)selenophene-2-yl]- (9CI) (CA INDEX NAME)

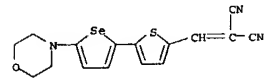
L4 ANSWER 6 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



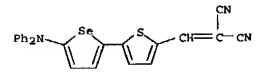
RN 473287-32-0 CAPLUS
CN 2-Selenophenamine, 5-(5-nitro-2-thienyl)-N,N-diphenyl- (9CI) (CA INDEX NAME)



RN 473287-33-1 CAPLUS
CN Propanedinitrile, [[5-[5-(4-morpholinyl)selenophene-2-yl]-2-thienyl]methylene]- (9CI) (CA INDEX NAME)

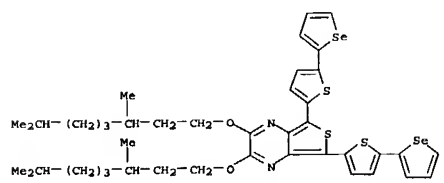


RN 473287-34-2 CAPLUS
CN Propanedinitrile, [[5-[5-(diphenylamino)selenophene-2-yl]-2-thienyl]methylene]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

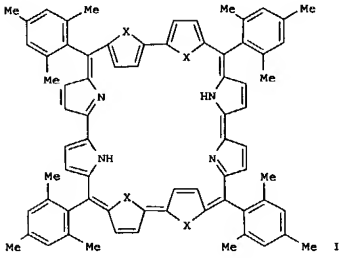
L4 ANSWER 7 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:12559 CAPLUS
DOCUMENT NUMBER: 136:238664
TITLE: Structure/property relations in the linear and third order nonlinear optical properties of substituted oligothiophenes
AUTHOR(S): Van Keuren, Edward; Andreaus, Reinhard; Mohwald, Helmut; Schrof, Wolfgang; Wakebe, Takanori; Belov, Vladimir; Matsuda, Hiro; Rangel-Rojo, Raul
CORPORATE SOURCE: Department of Physics, Georgetown University, Washington, DC, USA
SOURCE: MCLC S&T, Section B: Nonlinear Optics (2001), 28(1-2), 61-76
CODEN: MCLOEB; ISSN: 1058-7268
PUBLISHER: Gordon & Breach Science Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In studies of optical properties of polymers, a better understanding of structure/property relations can be achieved through the study of the corresponding oligomer systems. Using the Stille coupling reaction, a number of novel oligothiophene derivs. were synthesized with systematic variation in the number of repeat units, the position and number of substituents and in one case, substitution of Se for S in some of the heteroatoms. The linear and nonlinear optical characteristics of these oligomers in solution were measured at both resonant and nonresonant wavelengths, and some simple structure/property relations could be determined While the number and type of substituent groups as well as the main chain length had large effects on the optical properties, the figure of merit relevant to optical switching applications was little changed.
IT **402962-00-9**
RL: PRP (Properties)
(Structure/property relations in linear and third order nonlinear optical properties of substituted oligothiophenes)
RN 402962-00-9 CAPLUS
CN Thieno[3,4-b]pyrazine, 2,3-bis[(3,7-dimethyloctyl)oxy]-5,7-bis(5-selenophene-2-yl-2-thienyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS

L4 ANSWER 7 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

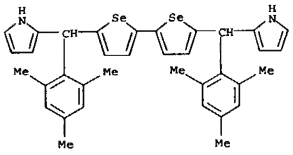
L4 ANSWER 8 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:574750 CAPLUS
DOCUMENT NUMBER: 135:288618
TITLE: 34π Octaphyrin: First Structural Characterization of a Planar, Aromatic [1.0.1.0.1.0.1.0] Octaphyrin with Inverted Heterocyclic Rings
AUTHOR(S): Anand, Venkataramanarao G.; Pushpan, Simi K.; Venkatraman, Sundararaman; Dey, Abhishek; Chandrashekar, Tavarekere K.; Joshi, Bhavani S.; Roy, Raja; Teng, Weijie; Senge, Karin Ruhlandt
CORPORATE SOURCE: Department of Chemistry, Indian Institute of Technology, Kanpur, 208016, India
SOURCE: Journal of the American Chemical Society (2001), 123(35), 8620-8621
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB The authors have successfully synthesized and characterized 34π planar, aromatic octaphyrins with inverted heterocyclic rings by a simple methodol.
using a single precursor, and the spectroscopic and structural data clearly suggest that the octaphyrins I (X = S) and I (X = Se) are aromatic
The relative energies for the inverted and noninverted structures were determined by ab initio and semiempirical methods and the results show that the
inverted structure is more stable by 18.14 kcal/mol relative to the noninverted structure.
IT **365279-93-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(structural characterization of a planar, 34π-aromatic

L4 ANSWER 8 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
[1.0.1.0.1.0.1.0] octaphyrin with inverted heterocyclic rings)
RN 365279-93-2 CAPLUS
CN 1H-Pyrrole, 2,2'-[[2,2'-biselenophene]-5,5'-diylbis[(2,4,6-trimethylphenyl)methylene]]bis- (9CI) (CA INDEX NAME)

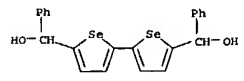


REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L4 ANSWER 9 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:327068 CAPLUS
DOCUMENT NUMBER: 135:92460
TITLE: N-Confused Expanded Porphyrin: First Example of a Modified Sapphyrin with an Inverted N-Confused Pyrrole Ring
AUTHOR(S): Pushpan, Simi K.; Srinivasan, Alagar; Anand, Venkataramanarao G.; Venkatraman, Sundararaman; Chandrashekar, Tavarekere K.; Joshi, Bhavani S.; Roy, Raja; Furuta, Hiroyuki
CORPORATE SOURCE: Department of Chemistry, Indian Institute of Technology, Kanpur, 208-016, India
SOURCE: Journal of the American Chemical Society (2001), 123(21), 5138-5139
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:92460
GI

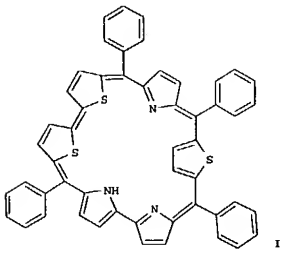
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The authors have successfully synthesized the first N-confused modified sapphyrins, e.g. I, and have shown that these mols. are stable and aromatic
and display an inverted structure in both freebase and protonated forms. Thus, condensation of tripyrrane II with bithiophene III in the presence of 0.15 equivalent of p-TsOH followed by chloranil oxidation gave I, instead of
the expected non-inverted N-confused sapphyrin IV, in 24% yield.
IT **238079-40-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(first example of a N-confused expanded porphyrin (modified sapphyrin) with an inverted N-confused pyrrole ring)
RN 238079-40-8 CAPLUS
CN [2,2'-Biselenophene]-5,5'-dimethanol, α,α'-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

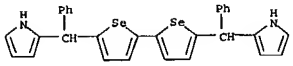
L4 ANSWER 10 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:292813 CAPLUS
DOCUMENT NUMBER: 135:92458
TITLE: Characterization of a new meso-aryl rubyrin isomer: [26]hexaphyrin (1.1.1.0.1.0) with an inverted heterocyclic ring
AUTHOR(S): Pushpan, S. K.; Anand, V. R. G.; Venkatraman, S.; Srinivasan, A.; Gupta, A. K.; Chandrashekar, T. K.
CORPORATE SOURCE: Department of Chemistry, Indian Institute of Technology, Kanpur, 208 016, India
SOURCE: Tetrahedron Letters (2001), 42(19), 3391-3394
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:92458
GI



I

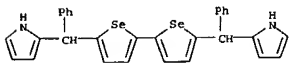
AB The synthesis and characterization of new aromatic 26π macrocycles, e.g. I, obtained from the acid catalyzed 4+3 coupling reaction of core modified tripyrrane and tetrapyrrane are described.
IT **314725-87-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(characterization of a new meso-aryl rubyrin isomer with an inverted heterocyclic ring)
RN 314725-87-6 CAPLUS
CN 1H-Pyrrole, 2,2'-[[2,2'-biselenophene]-5,5'-diylbis(phenylmethylene)]bis- (9CI) (CA INDEX NAME)

L4 ANSWER 10 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



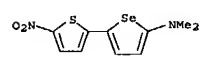
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L4 ANSWER 11 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:769988 CAPLUS
DOCUMENT NUMBER: 134:71421
TITLE: Meso Aryl Heptaphyrins: The First 30π Aromatic Expanded Porphyrins with an Inverted Structure
AUTHOR(S): Anand, Venkataramana Rao. G.; Pushpan, Simi K.; Srinivasan, Alagar; Narayanan, Seenichamy Jeyaprakash; Sridevi, Bashyam; Chandrashekar, Tavarekere K.; Roy, Raja; Joshi, Bhavani S.
CORPORATE SOURCE: Department of Chemistry, Indian Institute of Technology, Kanpur, 208 016, India
SOURCE: Organic Letters (2000), 2(24), 3829-3832
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:71421
AB Synthesis of new meso aryl 30π heptaphyrins is achieved. Spectroscopic studies reveal that these heptaphyrins are aromatic and possess an inverted structure.
IT **314725-87-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis, NMR and UV-VIS spectra of 30π aromatic heptaphyrins)
RN 314725-87-6 CAPLUS
CN 1H-Pyrrole, 2,2'-[[2,2'-biselenophene]-5,5'-diylbis(phenylmethylene)]bis- (9CI) (CA INDEX NAME)

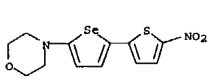


REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L4 ANSWER 12 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:132412 CAPLUS
DOCUMENT NUMBER: 132:266438
TITLE: New solvatochromic dyes of the 5-dimethylamino-5'-nitro-2,2'-bithiophene type
AUTHOR(S): Hartmann, Horst; Eckert, Katrin; Schroder, Anke
CORPORATE SOURCE: Fachbereich Chemie der Fachhochschule Merseburg, Merseburg, 02617, Germany
SOURCE: Angewandte Chemie, International Edition (2000), 39(3), 556-558
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In the preparation of 17 of the title dyes, a halomethylnitrobenzene or -thiophene is cyclocondensed with an unsatd. compound such as 1,3-bis(dimethylamino)propene-3-thione or -selenone with formation of iminium intermediates.
IT **263265-45-8P 263265-47-0P**
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; preparation of thiophene-based solvatochromic dyes)
RN 263265-45-8 CAPLUS
CN 2-Selenophenamine, N,N-dimethyl-5-(5-nitro-2-thienyl)- (9CI) (CA INDEX NAME)

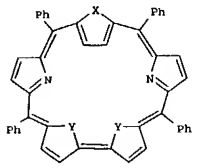


RN 263265-47-0 CAPLUS
CN Morpholine, 4-[5-(5-nitro-2-thienyl)selenophene-2-yl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

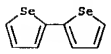
L4 ANSWER 13 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:680930 CAPLUS
DOCUMENT NUMBER: 132:35541
TITLE: Structural Characterization of Meso Aryl Sapphyrins
AUTHOR(S): Srinivasan, Alagar; Anand, V. G.; Narayanan, S. Jeyaprakash; Pushpan, Simi K.; Kumar, M. Ravi; Chandrashekar, Tavarekere K.; Sugiura, Ken-ichi; Sakata, Yoshiteru
CORPORATE SOURCE: Department of Chemistry, Indian Institute of Technology, Kanpur, 208 016, India
SOURCE: Journal of Organic Chemistry (1999), 64(23), 8693-8697
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:35541
GI



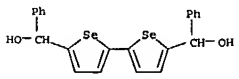
I

AB The authors report the synthesis of meso aryl sapphyrins (I) (X = NH, NMe, O, S, Se; Y = Se) and solved the first single-crystal X-ray structures of two inverted sapphyrins I (X = se, Y = S) (II) and I (X = NMe, Y = Se) (III) and report comparative X-ray structural data as well as spectroscopic data. Data anal. reveal that larger core sizes and the presence of small heteroatoms (N or O) adjacent to the heterocyclic ring lead to inverted structures, while the presence of bigger heteroatoms (S or Se) leads to planar structures. NMR data indicates that the inverted structures show reduced diatropic ring currents.
IT **6239-48-1P**, 2,2'-Biselenophene **238079-40-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and conformations of meso aryl sapphyrins)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)

L4 ANSWER 13 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

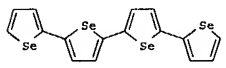


RN 238079-40-8 CAPLUS
CN [2,2'-Biselenophene]-5,5'-dimethanol, α,α'-diphenyl- (9CI) (CA INDEX NAME)



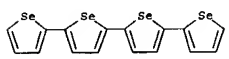
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:459472 CAPLUS
DOCUMENT NUMBER: 131:137034
TITLE: Molecular and crystal structures of 2,2':5',2'':5'',2'''-quaterselenophene
AUTHOR(S): Nakanishi, H.; Inoue, S.; Aso, Y.; Otsubo, T.
CORPORATE SOURCE: Faculty of Engineering, Hiroshima University, Higashi-Hiroshima, 739-8527, Japan
SOURCE: Synthetic Metals (1999), 101(1-3), 639
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



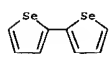
I

AB The quaterselenophene (I) assumes a stretched S-trans planar type of mol. structure and a herringbone stacking type of crystal structure. There are some Se···Se intermol. contacts along the b- and c-crystal axes.
IT **188905-11-5**, 2,2':5',2'':5'',2'''-Quaterselenophene
RL: PRP (Properties)
(mol. and crystal structure of quaterselenophene)
RN 188905-11-5 CAPLUS
CN 2,2':5',2'':5'',2'''-Quaterselenophene (9CI) (CA INDEX NAME)

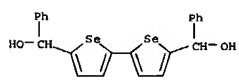


REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:348801 CAPLUS
DOCUMENT NUMBER: 131:170200
TITLE: Novel heteroatom containing rubyrins
AUTHOR(S): Srinivasan, Alagar; Pushpan, Simi K.; Ravikumar, Murugaeson; Chandrashekar, Tavarekere K.; Roy, Raja
CORPORATE SOURCE: Department of Chemistry, Indian Institute of Technology, Kanpur, 208 016, India
SOURCE: Tetrahedron (1999), 55(21), 6671-6680
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Synthesis of rubyrins containing two or three heteroatoms (O, S, Se) in the core is accomplished using modified diols and tetrapyrromethanes. Substitution of heteroatoms leads to significant redns. in HOMO-LUMO gap and easier oxidns. and redns. reflecting the changes in electronic structure of the rubyrin skeleton.
IT **6239-48-1P**, 2,2'-Biselenophene **238079-40-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis, spectral and electrochem. properties of heteroatom containing rubyrins)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 238079-40-8 CAPLUS
CN [2,2'-Biselenophene]-5,5'-dimethanol, α,α'-diphenyl- (9CI) (CA INDEX NAME)

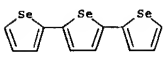


REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

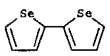
L4 ANSWER 16 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:193947 CAPLUS
DOCUMENT NUMBER: 130:238030
TITLE: Preparation and use of polyselenophenes
INVENTOR(S): Mohwald, Helmut; Belov, Vladimir; Schrof, Wolfgang
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 902043	A2	19990317	EP 1998-116886	19980907
EP 902043	A3	19990811		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11152323	A2	19990608	JP 1998-255795	19980909
US 6197922	B1	20010306	US 1998-149446	19980909

PRIORITY APPLN. INFO.: DE 1997-19739775 A 19970910
OTHER SOURCE(S): MARPAT 130:238030
AB Polyselenophenes with good elec. conductivity and broad applicability, containing
repeating units of specified structure, are prepared The Stille reaction of
2-iodoselenophene with 2-(trimethylsilyl)selenophene gave 69% 2,2'-biselenophene.
IT **67308-30-9P**, 2,2':5',2''-Terselenophene
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(preparation and reaction with butyllithium and trimethyltin chloride)
RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)

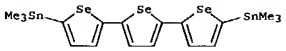


IT **6239-48-1P**, 2,2'-Biselenophene **220770-49-0P**
220770-51-4P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(preparation of)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)

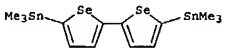


RN 220770-49-0 CAPLUS
CN Stannane, [2,2':5',2''-terselenophene]-5,5''-diylbis[trimethyl- (9CI) (CA

L4 ANSWER 16 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
INDEX NAME)



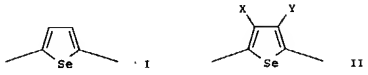
RN 220770-51-4 CAPLUS
CN Stannane, [2,2'-biselenophene]-5,5'-diylbis[trimethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 17 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:184327 CAPLUS
DOCUMENT NUMBER: 130:202690
TITLE: Polyselenophenes as materials with nonlinear optical properties
INVENTOR(S): Schrof, Wolfgang; Belov, Vladimir; Moehwald, Helmut; Rozouvan, Stanislav; Van Keuren, Edward
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 18 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

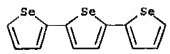
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19739774	A1	19990311	DE 1997-19739774	19970910
JP 11160745	A2	19990618	JP 1998-256411	19980910

PRIORITY APPLN. INFO.: DE 1997-19739774 19970910
GI

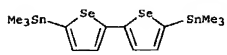


AB Nonlinear optical materials are described which comprise ≥1 polyzeleophenes having repeating units described by the general formulas I
and II (X, Y are not both H, and are independently selected from H, NO2, -NHR, and (un)branched C1-22 alkyl, alkoxy, alkyloxyalkyl, acyl, thioacyl,
thioacyloxy, or acyloxy groups, C5-8 cycloalkyl or heterocyclic groups, and C6-18 aryl groups which may be substituted with ≥1 (un)branched C1-22 alkyl, alkoxy, alkyloxyalkyl, acyl, and/or thioacyl groups, or X and
Y, together with the atoms to which they are bound, may form a C-containing
ring system which addnl. contains ≥1 of P, N, O, and/or S, with substituents selected from the same materials as ;X and Y being optionally
attached to the C, N, or P atoms, the substituents on adjacent atoms being
capable of forming further ring systems; R = H,(un)branched C1-22 alkyl, alkoxy, alkyloxyalkyl, acyl, and/or thioacyl groups). The selenophenes may be formed by reaction of a 2,5-bis(trialkyltin)selenophene with halo- or triflate-substituted selenophenes. The nonlinear optical materials may
addnl. contain other polymers.
IT **67308-30-9P**, 2,2':5',2''-Terselenophene **220770-51-4P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polyselenophene-based nonlinear optical materials)
RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)

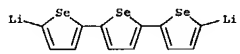
L4 ANSWER 17 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



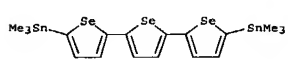
RN 220770-51-4 CAPLUS
CN Stannane, [2,2'-biselenophene]-5,5'-diylbis[trimethyl- (9CI) (CA INDEX NAME)



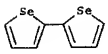
IT **220770-47-8P 220770-49-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polyselenophene-based nonlinear optical materials)
RN 220770-47-8 CAPLUS
CN Lithium, μ-[2,2':5',2''-terselenophene]-5,5''-diyldi- (9CI) (CA INDEX NAME)



RN 220770-49-0 CAPLUS
CN Stannane, [2,2':5',2''-terselenophene]-5,5''-diylbis[trimethyl- (9CI) (CA
INDEX NAME)

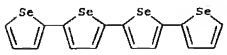


L4 ANSWER 18 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:502394 CAPLUS
DOCUMENT NUMBER: 130:52516
TITLE: The Photoelectron Spectrum of 2,2'-Bitellurophene
AUTHOR(S): Novak, Igor; Ng, Siu Choon; Wang, Li; Huang, Wei
CORPORATE SOURCE: Department of Chemistry, National University of Singapore, Singapore, 119260, Singapore
SOURCE: Journal of Chemical Research, Synopses (1998), (8), 438-439
CODEN: JRPSDC; ISSN: 0308-2342
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB He I and He II photoelectron spectra of 2,2'-bitellurophene were recorded and analyzed from empirical arguments.
IT **6239-48-1**, 2,2'-Biselenophene
RL: PRP (Properties)
(photoelectron spectra of)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

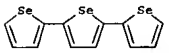
L4 ANSWER 19 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CN 2,2':5',2'':5'',2'''-Quaterselenophene (9CI) (CA INDEX NAME)



REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L4 ANSWER 19 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:483982 CAPLUS
DOCUMENT NUMBER: 129:316306
TITLE: Theoretical investigation of the structure and conformational behavior of small selenophene oligomers
AUTHOR(S): Millefiori, Salvatore; Alparone, Andrea
CORPORATE SOURCE: Dip. Scienze Chimiche, Univ. Catania, Catania, 95125, Italy
SOURCE: Synthetic Metals (1998), 95(3), 217-224
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The mol. structure and the conformational behavior of selenophene, 2,2'-biselenophene (α-2Se), 2,2':5',2''-terselenophene (α-3Se) and 2,2':5',2'':5'',2'''-quaterselenophene (α-4Se) were determined through conventional ab initio and d. functional calcns. using a polarized valence double zeta basis set. Hartree-Fock (HF) calcns. predict very flat 4-fold torsional potentials where the min. energy conformations correspond to anti-gauche structures and the less stable conformations to the syn form. The planar and perpendicular conformations are transition states. Zero point vibrational energy corrections have negligible effects. B3LYP calcns. favor π-electron interactions suggesting that the planar anti form is the ground state of α-oligoselenophenes. Torsional potentials were analyzed by a Fourier procedure in terms of nonbonding and conjugative interactions and were compared with corresponding data in S analogs.
IT **6239-48-1**, 2,2'-Biselenophene **67308-30-9**, 2,2':5',2''-Terselenophene **188905-11-5**, 2,2':5',2'':5'',2'''-Quaterselenophene
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(theor. investigation of structure and conformational behavior of small selenophene oligomers)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)



RN 188905-11-5 CAPLUS

own work

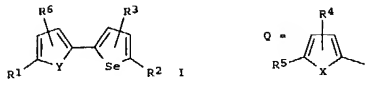
L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:812176 CAPLUS
DOCUMENT NUMBER: 128:75301
TITLE: Selenophene anti-tumor agents
INVENTOR(S): Chang, Ching-Jer; Ashendel, Curtis L.; Kim, Darrick
PATENT ASSIGNEE(S): Purdue Research Foundation, USA; Chang, Ching-Jer; Ashendel, Curtis L.; Kim, Darrick
SOURCE: PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9746225	A1	19971211	WO 1997-US9717	19970603
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9733007	A1	19980105	AU 1997-33007	19970603
AU 727123	B2	20001130		
EP 1021178	A1	20000726	EP 1997-928846	19970603
EP 1021178	B1	20030827		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001503381	T2	20010313	JP 1997-538390	19970603
AT 247955	E	20030915	AT 1997-928846	19970603
US 2003028015	A1	20030206	US 2002-61480	20020201
US 6620804	B2	20030916		
US 2004063662	A1	20040401	US 2003-658175	20030909

PRIORITY APPLN. INFO.: US 1996-19095P P 19960603
WO 1997-US9717 W 19970603
US 1998-180514 A1 19981111
US 2002-61480 A3 20020201

OTHER SOURCE(S): MARPAT 128:75301
GI

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



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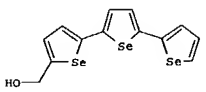
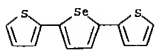


II

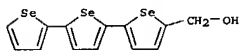
AB Novel selenophene compds. useful as anti-tumor agents are described. Preferred compds. include terselenophenes and analogs, specifically I [one of R1 and R2 = 5-membered ring Q; other = H, CH2OH, CHO, CH2NH2; X, Y = Se, S, O, NMe, NH; R3, R4, R6 = H, CHO, CH2OH, CH2NH2; R5 = H, CH2OH, CH2NH2] and their pharmaceutically acceptable salts and cyclodextrin complexes. Pharmaceutical compns. and a method for treating patients having tumors, utilizing the disclosed selenophene compds., are also described. For instance, double acylation of selenophene by succinyl chloride (25%) and selenation/cyclocondensation of the formed diketone with bis(tricyclohexyltin) selenide (80%) gave 2,2':5',2''-terselenophene, which was lithiated and formylated with DMF (75%) and reduced with NaBH4 (98%) to give title compound II. In tests for cytotoxicity toward human renal cells, II showed a selectivity of > 1000 against A-498 human renal carcinoma cells vs. normal cells in vitro.

IT **51678-15-0P**, 2,2':5,2''-Dithienylselenophene **67308-30-9P**, 2,2':5',2''-Terselenophene **130236-58-7P**, 2,2':5,2''-Diselenophenylthiophene **200508-93-6P**, 2,2':5,2''-Diselenophenylpyrrole **200508-94-7P**, 5'-Formyl-2,2':5,2''-diselenophenylpyrrole
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of terselenophenes and analogs as antitumor agents)

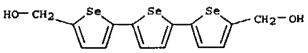
RN 51678-15-0 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)



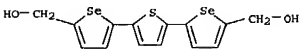
L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



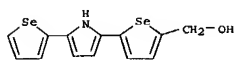
RN 200508-83-4 CAPLUS
CN [2,2':5',2''-Terselenophene]-5,5''-dimethanol (9CI) (CA INDEX NAME)



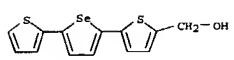
RN 200508-92-5 CAPLUS
CN 2-Selenophenemethanol, 5,5'-(2,5-thiophenediyl)bis- (9CI) (CA INDEX NAME)



RN 200508-95-8 CAPLUS
CN 2-Selenophenemethanol, 5-(5-selenophene-2-yl-1H-pyrrol-2-yl)- (9CI) (CA INDEX NAME)

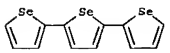


RN 200509-02-0 CAPLUS
CN 2-Thiophenemethanol, 5-[5-(2-thienyl)selenophene-2-yl]- (9CI) (CA INDEX NAME)

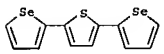


IT **130236-57-6P**, 2,2':5,2''-Difuranylselenophene **130236-59-8P**, 2,2':5,2''-Diselenophenylfuran **200508-80-1P**, 2-Formyl-5,2':5',2''-terselenophene **200508-81-2P**, 2,5''-Diformyl-5,2':5',2''-terselenophene **200508-85-6P**, 5'-Formyl-2,2':5,2''-diselenophenylfuran **200508-86-7P**, 5',5''-Diformyl-2,2':5,2''-diselenophenylfuran **200508-89-0P**, 5'-Formyl-2,2':5,2''-diselenophenylthiophene **200508-90-3P**, 5',5''-Diformyl-2,2':5,2''-diselenophenylthiophene **200508-96-9P**, 5'-Formyl-2,2':5,2''-difuranylselenophene **200508-97-0P**, 5',5''-Diformyl-2,2':5,2''-difuranylselenophene **200509-00-8P**, 5''-Formyl-2,2':5,2''-dithienylselenophene **200509-01-9P**, 5',5''-Diformyl-2,2':5,2''-dithienylselenophene **200509-04-2P**, 2-(2'-Selenyl)-5-(2''-thienyl)thiophene **200509-12-2P**,

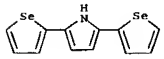
L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)



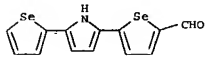
RN 130236-58-7 CAPLUS
CN Thiophene, 2,5-diselenophene-2-yl- (9CI) (CA INDEX NAME)



RN 200508-93-6 CAPLUS
CN 1H-Pyrrole, 2,5-diselenophene-2-yl- (9CI) (CA INDEX NAME)



RN 200508-94-7 CAPLUS
CN 2-Selenophenecarboxaldehyde, 5-(5-selenophene-2-yl-1H-pyrrol-2-yl)- (9CI) (CA INDEX NAME)

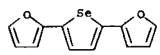


IT **200508-82-3P**, 2-(Hydroxymethyl)-5,2':5',2''-terselenophene **200508-83-4P**, 2,5''-Bis(hydroxymethyl)-5,2':5',2''-terselenophene **200508-92-5P**, 5',5''-Bis(hydroxymethyl)-2,2':5,2''-diselenophenylthiophene **200508-95-8P**, 5'-(Hydroxymethyl)-2,2':5,2''-diselenophenylpyrrole **200509-02-0P**, 5'-(Hydroxymethyl)-2,2':5,2''-dithienylselenophene
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of terselenophenes and analogs as antitumor agents)

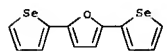
RN 200508-82-3 CAPLUS
CN [2,2':5',2''-Terselenophene]-5-methanol (9CI) (CA INDEX NAME)

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
5',5''-Diformyl-2-(2''-selenyl)-5-(2''-thienyl)thiophene
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of terselenophenes and analogs as antitumor agents)

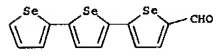
RN 130236-57-6 CAPLUS
CN Furan, 2,2'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)



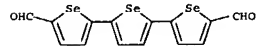
RN 130236-59-8 CAPLUS
CN Furan, 2,5-diselenophene-2-yl- (9CI) (CA INDEX NAME)



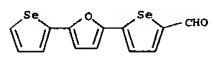
RN 200508-80-1 CAPLUS
CN [2,2':5',2''-Terselenophene]-5-carboxaldehyde (9CI) (CA INDEX NAME)



RN 200508-81-2 CAPLUS
CN [2,2':5',2''-Terselenophene]-5,5''-dicarboxaldehyde (9CI) (CA INDEX NAME)

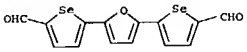


RN 200508-85-6 CAPLUS
CN 2-Selenophenecarboxaldehyde, 5-(5-selenophene-2-yl-2-furanyl)- (9CI) (CA INDEX NAME)

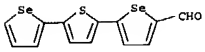


RN 200508-86-7 CAPLUS
CN 2-Selenophenecarboxaldehyde, 5,5'-(2,5-furandiyl)bis- (9CI) (CA INDEX NAME)

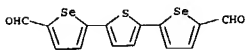
L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



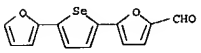
RN 200508-89-0 CAPLUS
CN 2-Selenophenecarboxaldehyde, 5-(5-selenophene-2-yl-2-thienyl)- (9CI) (CA INDEX NAME)



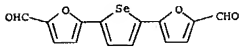
RN 200508-90-3 CAPLUS
CN 2-Selenophenecarboxaldehyde, 5,5'-(2,5-thiophenediyl)bis- (9CI) (CA INDEX NAME)



RN 200508-96-9 CAPLUS
CN 2-Furancarboxaldehyde, 5-[5-(2-furanyl)selenophene-2-yl]- (9CI) (CA INDEX NAME)



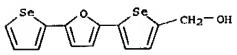
RN 200508-97-0 CAPLUS
CN 2-Furancarboxaldehyde, 5,5'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)



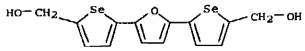
RN 200509-00-8 CAPLUS
CN 2-Thiophenecarboxaldehyde, 5-[5-(2-thienyl)selenophene-2-yl]- (9CI) (CA INDEX NAME)

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

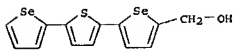
RN 200508-87-8 CAPLUS
CN 2-Selenophenemethanol, 5-(5-selenophene-2-yl-2-furanyl)- (9CI) (CA INDEX NAME)



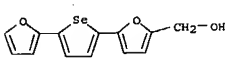
RN 200508-88-9 CAPLUS
CN 2-Selenophenemethanol, 5,5'-(2,5-furandiyl)bis- (9CI) (CA INDEX NAME)



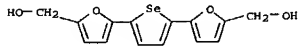
RN 200508-91-4 CAPLUS
CN 2-Selenophenemethanol, 5-(5-selenophene-2-yl-2-thienyl)- (9CI) (CA INDEX NAME)



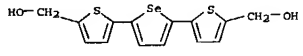
RN 200508-98-1 CAPLUS
CN 2-Furanmethanol, 5-[5-(2-furanyl)selenophene-2-yl]- (9CI) (CA INDEX NAME)



RN 200508-99-2 CAPLUS
CN 2-Furanmethanol, 5,5'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)

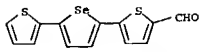


RN 200509-03-1 CAPLUS
CN 2-Thiophenemethanol, 5,5'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)

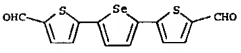


RN 200509-06-4 CAPLUS

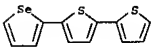
L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



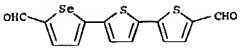
RN 200509-01-9 CAPLUS
CN 2-Thiophenecarboxaldehyde, 5,5'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)



RN 200509-04-2 CAPLUS
CN 2,2'-Bithiophene, 5-selenophene-2-yl- (9CI) (CA INDEX NAME)

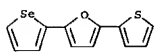


RN 200509-12-2 CAPLUS
CN [2,2'-Bithiophene]-5-carboxaldehyde, 5'-(5-formylselenophene-2-yl)- (9CI) (CA INDEX NAME)

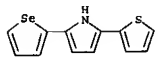


IT **200508-87-8P**, 5'-(Hydroxymethyl)-2,2':5,2''-diselenophenylfuran **200508-88-9P**, 5',5''-Bis(hydroxymethyl)-2,2':5,2''-diselenophenylfuran **200508-91-4P**, 5'-(Hydroxymethyl)-2,2':5,2''-diselenophenylthiophene **200508-98-1P**, 5'-(Hydroxymethyl)-2,2':5,2''-difuranylselenophene **200508-99-2P**, 5',5''-Bis(hydroxymethyl)-2,2':5,2''-difuranylselenophene **200509-03-1P**, 5',5''-Bis(hydroxymethyl)-2,2':5,2''-dithienylselenophene **200509-06-4P**, 2-(2'-Selenyl)-5-(2''-thienyl)furan **200509-07-5P**, 2-(2'-Selenyl)-5-(2''-thienyl)pyrrole **200509-09-7P**, 2-(2'-Selenyl)-5-(2''-furyl)thiophene **200509-10-0P**, 2-(2'-Selenyl)-5-(2''-furyl)pyrrole **200509-11-1P**, 2,5-Bis(2'-selenyl)-N-methylpyrrole **200509-13-3P**, 5',5''-Bis(hydroxymethyl)-2-(2'-selenyl)-5-(2''-thienyl)thiophene
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of terselenophenes and analogs as antitumor agents)

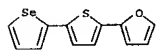
L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CN Furan, 2-selenophene-2-yl-5-(2-thienyl)- (9CI) (CA INDEX NAME)



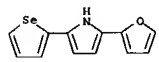
RN 200509-07-5 CAPLUS
CN 1H-Pyrrole, 2-selenophene-2-yl-5-(2-thienyl)- (9CI) (CA INDEX NAME)



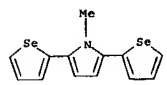
RN 200509-09-7 CAPLUS
CN Furan, 2-(5-selenophene-2-yl-2-thienyl)- (9CI) (CA INDEX NAME)



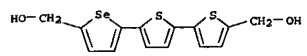
RN 200509-10-0 CAPLUS
CN 1H-Pyrrole, 2-(2-furanyl)-5-selenophene-2-yl- (9CI) (CA INDEX NAME)



RN 200509-11-1 CAPLUS
CN 1H-Pyrrole, 1-methyl-2,5-diselenophene-2-yl- (9CI) (CA INDEX NAME)



RN 200509-13-3 CAPLUS
CN [2,2'-Bithiophene]-5-methanol, 5'-[5-(hydroxymethyl)selenophene-2-yl]- (9CI) (CA INDEX NAME)



L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

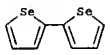
L4 ANSWER 21 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:805927 CAPLUS
DOCUMENT NUMBER: 128:3439
TITLE: Entropy characteristics of some oxygen-, sulfur-, and selenium- containing cyclic organic compounds adsorbed on graphitized carbon black
AUTHOR(S): Lopatkin, A. A.; Dallakyan, P. B.
CORPORATE SOURCE: Khim. Fak., MGU, MOscow, Russia
SOURCE: Zhurnal Fizicheskoi Khimii (1997), 71(7), 1333-1335
CODEN: ZFKHA9; ISSN: 0044-4537
PUBLISHER: MAIK Nauka
DOCUMENT TYPE: Journal
LANGUAGE: Russian

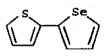
AB Equilibrium consts. were measured for 35 title compds. on graphitized carbon black by gas chromatog. In almost all cases these data followed the mol. model of an ideal 2-dimensional gas, the deviation not exceeding 6-8%. Greater deviations were attributed to steric considerations.

IT **6239-48-1**, 2,2'-Biselenophene **119507-82-3**, Thiophene, 2-(selenophene-2-yl)-
RL: PRP (Properties)
(entropy characteristics of oxygen-, sulfur-, and selenium- containing cyclic organic compds. adsorbed on graphitized carbon black)

RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 119507-82-3 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)



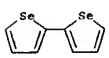
L4 ANSWER 22 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:792627 CAPLUS
DOCUMENT NUMBER: 128:61579
TITLE: The first oligoselenophenes: synthesis and properties
AUTHOR(S): Nakanishi, Hidetaka; Inoue, Shinobu; Otsubo, Tetsuo
CORPORATE SOURCE: Department of Applied Chemistry, Faculty of Engineering, Hiroshima University, Higashi-Hiroshima, 739, Japan
SOURCE: Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1997), 296, 335-348
CODEN: MCLCE9; ISSN: 1058-725X
PUBLISHER: Gordon & Breach Science Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

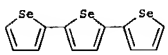
AB Oligoselenophenes with well-defined structures up to the hexamer were synthesized using the Stille coupling reactions, and their phys. properties were studied by electronic absorption and emission spectroscopy as well as cyclic voltammetry. Their spectra systematically change with increasing conjugated chain lengths, and the correlations are reminiscent of those for oligothiophene series, suggesting that conjugation forms of both π-electronic systems are very similar. The oligoselenophenes, on I doping, have relatively high conductivities comparable to those of the oligothiophene counterparts, which increase up to .apprx.10-2 Scm-1 with an increasing number of the selenophene units.

IT **6239-48-1P**, 2,2'-Biselenophene **67308-30-9P**, 2,2':5',2''-Terselenophene **116886-64-7P**, 5,5'-Dibromo-2,2'-Biselenophene **116886-65-8P** **200284-71-5P**, [2,2'-Biselenophene]-5-carboxaldehyde **200284-73-7P** **200284-76-0P** **200284-78-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and properties of oligoselenophenes)

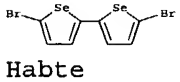
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)

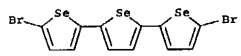


RN 116886-64-7 CAPLUS
CN 2,2'-Biselenophene, 5,5'-dibromo- (9CI) (CA INDEX NAME)

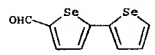


L4 ANSWER 22 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

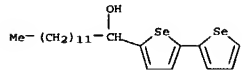
RN 116886-65-8 CAPLUS
CN 2,2':5',2''-Terselenophene, 5,5''-dibromo- (9CI) (CA INDEX NAME)



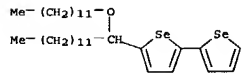
RN 200284-71-5 CAPLUS
CN [2,2'-Biselenophene]-5-carboxaldehyde (9CI) (CA INDEX NAME)



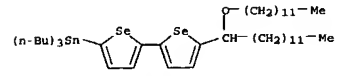
RN 200284-73-7 CAPLUS
CN [2,2'-Biselenophene]-5-methanol, α-dodecyl- (9CI) (CA INDEX NAME)



RN 200284-76-0 CAPLUS
CN 2,2'-Biselenophene, 5-[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)



RN 200284-78-2 CAPLUS
CN Stannane, tributyl[5'-[1-(dodecyloxy)tridecyl][2,2'-biselenophen]-5-yl]- (9CI) (CA INDEX NAME)



IT **188905-08-0P** **188905-10-4P** **188905-11-5P**, 2,2':5',2'':5'',2'''-Quaterselenophene **188905-13-7P** **188905-14-8P** **188905-16-0P** **188905-17-1P** **200284-50-0P** **200284-52-2P** **200284-54-4P** **200284-56-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)

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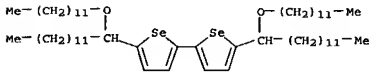
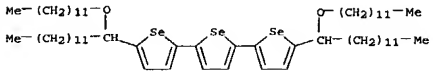
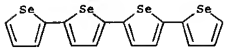
L4 ANSWER 22 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(prepn. of)
RN 188905-08-0 CAPLUS
CN 2,2'-Biselenophene, 5,5'-bis[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)



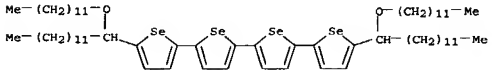
RN 188905-10-4 CAPLUS
CN 2,2':5',2''-Terselenophene, 5,5''-bis[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)



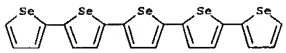
RN 188905-11-5 CAPLUS
CN 2,2':5',2'':5'',2'''-Quaterselenophene (9CI) (CA INDEX NAME)



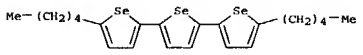
RN 188905-13-7 CAPLUS
CN 2,2':5',2'':5'',2'''-Quaterselenophene, 5,5'''-bis[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)



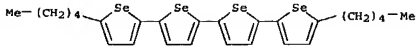
RN 188905-14-8 CAPLUS
CN 2,2':5',2'':5'',2''':5''',2''''-Quinqueselenophene (9CI) (CA INDEX NAME)



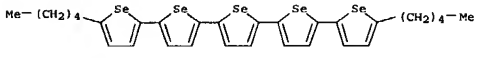
L4 ANSWER 22 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CN 2,2':5',2''-Terselenophene, 5,5''-dipentyl- (9CI) (CA INDEX NAME)



RN 200284-54-4 CAPLUS
CN 2,2':5',2'':5'',2'''-Quaterselenophene, 5,5'''-dipentyl- (9CI) (CA INDEX NAME)



RN 200284-56-6 CAPLUS
CN 2,2':5',2'':5'',2''':5''',2''''-Quinqueselenophene, 5,5''''-dipentyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 22 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

RN 188905-16-0 CAPLUS
CN 2,2':5',2'':5'',2''':5''',2''''-Quinqueselenophene, 5,5''''-bis[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)

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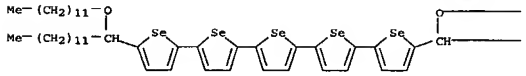

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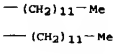
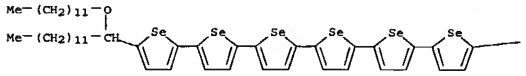
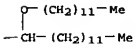


RN 188905-17-1 CAPLUS
CN 2,2':5',2'':5'',2''':5''',2'''':5'''',2'''''-Sexiselenophene, 5,5'''''-[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)

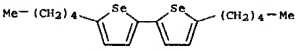
PAGE 1-A



PAGE 1-B

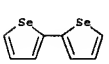


RN 200284-50-0 CAPLUS
CN 2,2'-Biselenophene, 5,5'-dipentyl- (9CI) (CA INDEX NAME)

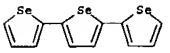


RN 200284-52-2 CAPLUS

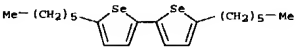
L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:217339 CAPLUS
DOCUMENT NUMBER: 126:278109
TITLE: Electrochemical and spectroscopic properties of oligoselenophenes
AUTHOR(S): Inoue, S.; Nakanishi, H.; Takimiya, K.; Aso, Y.; Otsubo, T.
CORPORATE SOURCE: Department of Applied Chemistry, Faculty of Engineering, Hiroshima University, Higashi-Hiroshima, 739, Japan
SOURCE: Synthetic Metals (1997), 84(1-3), 341-342
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The cyclic voltammograms and electronic absorption spectra of a series of α-oligoselenophenes were studied and systematically changed depending on the conjugated chain lengths, being reminiscent of those for the oligothiophene series. Their radical cations and dications were successively generated by stoichiometric oxidns. with FeCl3 in dichloromethane and characterized by electronic spectroscopy. In addition, electrolysis of the unsubstituted oligoselenophenes gave polymeric films very similar to that obtained from selenophene itself, which was suggested to have a limited conjugation.
IT **6239-48-1**, 2,2'-Biselenophene **67308-30-9**, 2,2':5',2''-Terselenophene **188905-07-9** **188905-08-0** **188905-09-1** **188905-10-4** **188905-11-5**, 2,2':5',2'':5'',2'''-Quaterselenophene **188905-12-6** **188905-13-7** **188905-14-8** **188905-15-9** **188905-16-0** **188905-17-1**
RL: PRP (Properties)
(electrochem. and spectroscopic properties of oligoselenophenes)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)

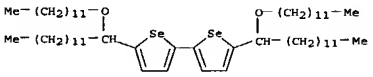


RN 188905-07-9 CAPLUS
CN 2,2'-Biselenophene, 5,5'-dihexyl- (9CI) (CA INDEX NAME)

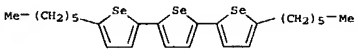


L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

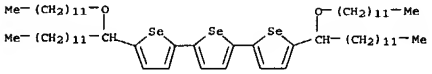
RN 188905-08-0 CAPLUS
CN 2,2'-Biselenophene, 5,5'-bis[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)



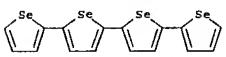
RN 188905-09-1 CAPLUS
CN 2,2':5',2''-Terselenophene, 5,5''-dihexyl- (9CI) (CA INDEX NAME)



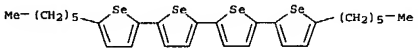
RN 188905-10-4 CAPLUS
CN 2,2':5',2''-Terselenophene, 5,5''-bis[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)



RN 188905-11-5 CAPLUS
CN 2,2':5',2'':5'',2'''-Quaterselenophene (9CI) (CA INDEX NAME)



RN 188905-12-6 CAPLUS
CN 2,2':5',2'':5'',2'''-Quaterselenophene, 5,5'''-dihexyl- (9CI) (CA INDEX NAME)



RN 188905-13-7 CAPLUS
CN 2,2':5',2'':5'',2'''-Quaterselenophene, 5,5'''-bis[1-(dodecyloxy)tridecyl]-

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

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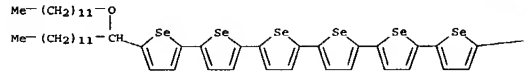

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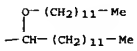
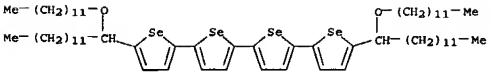
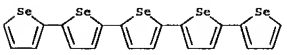


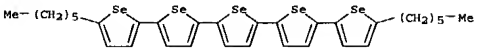
L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(9CI) (CA INDEX NAME)



RN 188905-14-8 CAPLUS
CN 2,2':5',2'':5'',2''':5''',2''''-Quinqueselenophene (9CI) (CA INDEX NAME)



RN 188905-15-9 CAPLUS
CN 2,2':5',2'':5'',2''':5''',2''''-Quinqueselenophene, 5,5''''-dihexyl- (9CI)
(CA INDEX NAME)



RN 188905-16-0 CAPLUS
CN 2,2':5',2'':5'',2''':5''',2''''-Quinqueselenophene, 5,5''''-bis[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)

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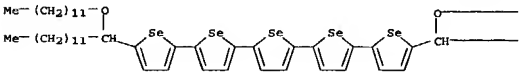

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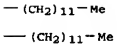


RN 188905-17-1 CAPLUS
CN 2,2':5',2'':5'',2''':5''',2'''':5'''',2''''':Sexiselenophene, 5,5'''''-[1-(dodecyloxy)tridecyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 24 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:715345 CAPLUS
DOCUMENT NUMBER: 126:32086
TITLE: Influence of doping anion on electrochemical and physical properties of polyselenienyl thiophene polymer
AUTHOR(S): Peulon, Valerie; Barbey, Gerard; Malandain, Jean-Jacques
CORPORATE SOURCE: Laboratoire d'Electrochimie et de Chimie Analytique, Universite de Rouen, UFR des Sciences et Techniques, 76821, Mont-Saint-Aignan, Fr.
SOURCE: Synthetic Metals (1996), 82(2), 111-117
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

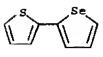
AB The effect of counter ions on electrochem. and phys. properties of polyselenienyl thiophene (PSeT) films was investigated. The films were prepared by anodic oxidation of selenienyl thiophene in acetonitrile using PF6-, ClO4-, BF4- and CF3SO3- as the doping anion. Electrochem. characterization of these films using the same electrolyte as that used for electrosynthesis shows that their electrochem. properties are mainly controlled by the anion. The influence of the electrolyte on the morphol. and the conductivity of PSeT films was analyzed. The anion effect can be related to the size of the counter ion. The bands specific to each doping species are distinctly observable in FTIR spectra for the doped PSeT films.

IT 127475-91-6, Thiophene, 2-(selenophene-2-yl)-, homopolymer
RL: PRP (Properties)
(influence of doping anion on electrochem. and phys. properties of polyselenienyl thiophene)

RN 127475-91-6 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 119507-82-3
CMF C8 H6 S Se



L4 ANSWER 25 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:710178 CAPLUS
DOCUMENT NUMBER: 125:342351
TITLE: Nonlinear optical materials and apparatus
INVENTOR(S): Ooba, Naoki; Kaino, Toshikuni; Tomaru, Akira
PATENT ASSIGNEE(S): Nippon Telegraph & Telephone, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08320574	A2	19960830	JP 1995-50307	19950216
JP 3271463	B2	20020402		

PRIORITY APPLN. INFO.: JP 1995-50307 19950216
AB A fast broadband nonlinear material comprises a polyarylene ethynylene (Ar)nC.tplbond.C(Ar')mC.tplbond.C, where Ar, Ar' = (un)substituted aromatic donor and acceptor ring with respect to conjugate system, resp.; n, m = 1-6; and n and/or m ≥2.
IT **183596-82-9 183596-83-0 183596-86-3**
RL: TEM (Technical or engineered material use); USES (Uses)
(third-order nonlinear optical materials and apparatus)
RN 183596-82-9 CAPLUS
CN Poly[(2,2'-dimethyl[3,3'-bipyridine]-6,6'-diyl)-1,2-ethynediyl[2,2':5',2''-terselenophene]-5,5''-diyl-1,2-ethynediyl] (9CI) (CA INDEX NAME)

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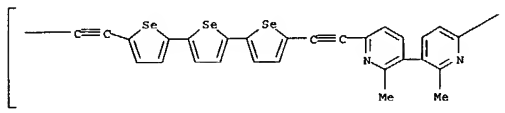

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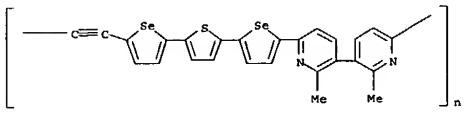
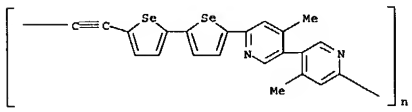
RN 183596-83-0 CAPLUS

L4 ANSWER 25 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CN Poly[(2,2'-dimethyl[3,3'-bipyridine]-6,6'-diyl)-2,5-selenophenediyl-2,5-thiophenediyl-2,5-selenophenediyl-1,2-ethynediyl] (9CI) (CA INDEX NAME)



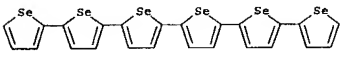
RN 183596-86-3 CAPLUS
CN Poly[(4,4'-dimethyl[3,3'-bipyridine]-6,6'-diyl)[2,2'-biselenophene]-5,5'-diyl-1,2-ethynediyl] (9CI) (CA INDEX NAME)



L4 ANSWER 26 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:200132 CAPLUS
DOCUMENT NUMBER: 124:246135
TITLE: Organic superlattice material, production thereof and device therefrom
INVENTOR(S): Hamano, Koji; Kurata, Tetsuyuki; Fuchigami, Hiroyuki; Nobutoki, Eiji; Fukada, Che; Nakao, Yukyasu
PATENT ASSIGNEE(S): Mitsubishi Electric Corp, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07325329	A2	19951212	JP 1994-120058	19940601
JP 2975530	B2	19991110		

PRIORITY APPLN. INFO.: JP 1994-120058 19940601
AB An organic material, suitable for use as nonlinear optical and electronic materials, is prepared by laminating ≥2 kind of organic thin films having a thickness 0.5-100 nm, wherein the organic thin film comprises π-conjugated linear oligomers.
IT **174895-62-6 174895-72-8 174895-77-3**
174895-81-9 174895-91-1 174895-93-3
174895-94-4 174895-97-7 174895-98-8
174896-03-8 174896-27-6 174896-29-8
RL: DEV (Device component use); USES (Uses)
(organic superlattice material, production thereof and device therefrom)
RN 174895-62-6 CAPLUS
CN 2,2':5',2'':5'',2''':5''',2'''':5'''',2''''':5''''',2'''''-Sexiselenophene (9CI) (CA INDEX NAME)



RN 174895-72-8 CAPLUS
CN 2,2'-Bi-1H-pyrrole, 5-methyl-5'-[3,3',3''-triethyl-5''-[5'-(3,3',3''-triethyl-5''-methyl[2,2':5',2''-terselenophen]-5-yl)[2,2'-bi-1H-pyrrol]-5-yl][2,2':5',2''-terselenophen]-5-yl]- (9CI) (CA INDEX NAME)

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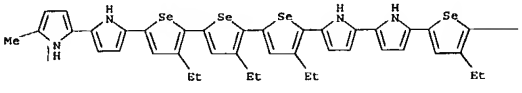

L4 ANSWER 26 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

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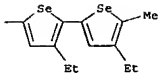
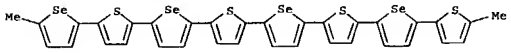
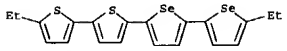


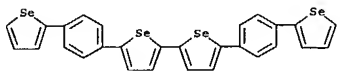
RN 174895-77-3 CAPLUS
CN Thiophene, 2-[5-[5-(5-methylselenophene-2-yl)-2-thienyl]selenophene-2-yl]-5-[5-[5-[5-(5-methyl-2-thienyl)selenophene-2-yl]-2-thienyl]selenophene-2-yl]- (9CI) (CA INDEX NAME)



RN 174895-81-9 CAPLUS
CN 2,2'-Bithiophene, 5-ethyl-5'-(5'-ethyl[2,2'-biselenophen]-5-yl)- (9CI) (CA INDEX NAME)



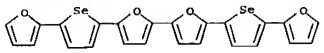
RN 174895-91-1 CAPLUS
CN 2,2'-Biselenophene, 5,5'-bis(4-selenophene-2-ylphenyl)- (9CI) (CA INDEX NAME)



RN 174895-93-3 CAPLUS
CN Furan, 2,2'-[2,2'-biselenophene]-5,5'-diylbis[5-selenophene-2-yl- (9CI) (CA INDEX NAME)

RN 174895-94-4 CAPLUS
CN 2,2'-Bifuran, 5,5'-bis[5-(2-furanyl)selenophene-2-yl]- (9CI) (CA INDEX NAME)

L4 ANSWER 26 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 174895-97-7 CAPLUS
CN 1H-Pyrrole, 2,2'-[2,2'-biselenophene]-5,5'-diylbis[5-[5'-(5-selenophene-2-yl-1H-pyrrol-2-yl)[2,2'-biselenophen]-5-yl]- (9CI) (CA INDEX NAME)

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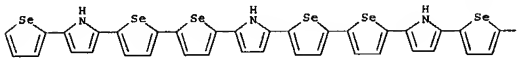

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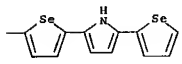
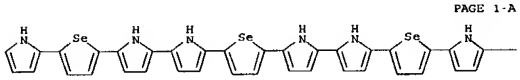
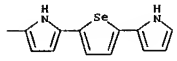


RN 174895-98-8 CAPLUS
CN 2,2'-Bi-1H-pyrrole, 5,5'-bis[5-[5'-[5-(1H-pyrrol-2-yl)selenophene-2-yl][2,2'-bi-1H-pyrrol]-5-yl]selenophene-2-yl]- (9CI) (CA INDEX NAME)

PAGE 1-A

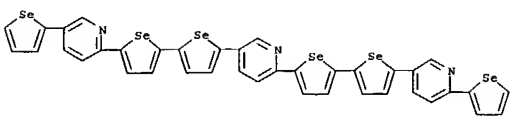


PAGE 1-B



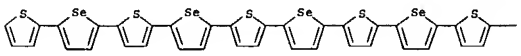
RN 174896-03-8 CAPLUS
CN Pyridine, 5-[5'-(5-selenophene-2-yl-2-pyridinyl)[2,2'-biselenophen]-5-yl]-2-[5'-(6-selenophene-2-yl-3-pyridinyl)[2,2'-biselenophen]-5-yl]- (9CI) (CA INDEX NAME)

L4 ANSWER 26 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



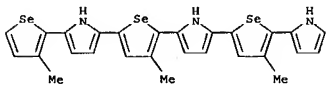
RN 174896-27-6 CAPLUS
CN Thiophene, 2-[5-[5-[5-[5-(5-selenophene-2-yl-2-thienyl)selenophene-2-yl]-2-thienyl]selenophene-2-yl]-5-[5-[5-[5-(2-thienyl)selenophene-2-yl]-2-thienyl]selenophene-2-yl]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

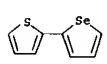
RN 174896-29-8 CAPLUS
CN 1H-Pyrrole, 2-[3-methyl-5-[5-(3-methylselenophene-2-yl)-1H-pyrrol-2-yl]selenophene-2-yl]-5-[4-methyl-5-(1H-pyrrol-2-yl)selenophene-2-yl]- (9CI) (CA INDEX NAME)



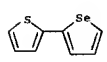
L4 ANSWER 27 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:847709 CAPLUS
DOCUMENT NUMBER: 123:299816
TITLE: Electrochemical and structural studies of polyselenienylthiophene nucleation
AUTHOR(S): Peulon, Valerie; Barbey, Gerard; Valleton, Jean-Marc; Alexandre, Stephane
CORPORATE SOURCE: Laboratoire d'Electrochimie Interfaciale et de Chimie Analytique, UFR des Sciences, Universite de Rouen, Mont-Saint-Aignan, 76821, Fr.
SOURCE: Synthetic Metals (1995), 74(1), 15-19
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Potential-step expts. were used to study the electrodeposition of polyselenienylthiophene (PSeT, poly(2-selenophene-2-yl)thiophene) films. The initial step in the formation of films is a nucleation process. The electrochem. data obtained show many similarities to that for the nucleation and growth of a metal film. Also, atomic force microscopy (AFM) was used to specify the growth morphol. for thin coverages of perchlorate-doped PSeT.
IT **127475-91-6**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(electrodeposition and morphol. of perchlorate-doped)
RN 127475-91-6 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 119507-82-3
CMF C8 H6 S Se



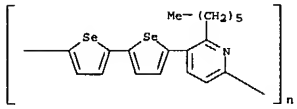
IT **119507-82-3**
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(electropolymn. in acetonitrile containing lithium perchlorate)
RN 119507-82-3 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)



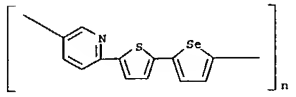
L4 ANSWER 28 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:733275 CAPLUS
DOCUMENT NUMBER: 123:127110
TITLE: Nonlinear optical materials and apparatus
INVENTOR(S): Kaino, Toshikuni; Ooba, Naoki; Tomaru, Akira; Kurihara, Takashi
PATENT ASSIGNEE(S): Nippon Telegraph & Telephone, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07104326	A2	19950421	JP 1993-247216	19931001

PRIORITY APPLN. INFO.: JP 1993-247216 19931001
AB A high-conversion fast nonlinear material comprises a conjugated polymer containing a (substituted) thiophene (or selephene) as a donor and a (substituted) pyridine as an acceptor, wherein the substituents are alkyl and alkoxy groups.
IT **166259-61-6P 166259-63-8P 166259-64-9P**
166259-66-1P 166259-68-3P 166259-74-1P
166259-79-6P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and use of nonlinear optical polymers)
RN 166259-61-6 CAPLUS
CN Poly[(6-hexyl-2,5-pyridinediyl)[2,2'-biselenophene]-5,5'-diyl] (9CI) (CA INDEX NAME)

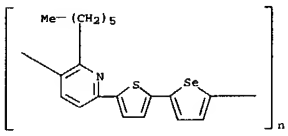


RN 166259-63-8 CAPLUS
CN Poly(5,2-pyridinediyl-2,5-thiophenediyl-2,5-selenophenediyl) (9CI) (CA INDEX NAME)

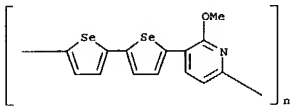


RN 166259-64-9 CAPLUS
CN Poly[(6-hexyl-5,2-pyridinediyl)-2,5-thiophenediyl-2,5-selenophenediyl] (9CI) (CA INDEX NAME)

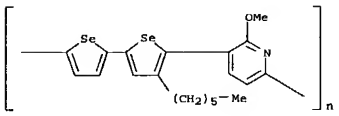
L4 ANSWER 28 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 166259-66-1 CAPLUS
CN Poly[(6-methoxy-2,5-pyridinediyl)[2,2'-biselenophene]-5,5'-diyl] (9CI) (CA INDEX NAME)

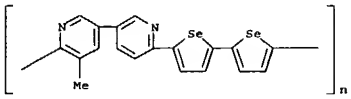


RN 166259-68-3 CAPLUS
CN Poly[(6-methoxy-2,5-pyridinediyl)(4-hexyl[2,2'-biselenophene]-5,5'-diyl)] (9CI) (CA INDEX NAME)

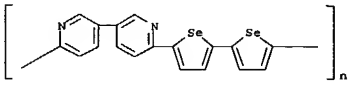


RN 166259-74-1 CAPLUS
CN Poly[(5-methyl[3,3'-bipyridine]-6,6'-diyl)[2,2'-biselenophene]-5,5'-diyl] (9CI) (CA INDEX NAME)

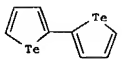
L4 ANSWER 28 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 166259-79-6 CAPLUS
CN Poly([3,3'-bipyridine]-6,6'-diyl[2,2'-biselenophene]-5,5'-diyl) (9CI) (CA INDEX NAME)

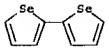


L4 ANSWER 29 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:182439 CAPLUS
DOCUMENT NUMBER: 122:106010
TITLE: 2,2'-Bitellurophene and 2,2':5',2''-tertellurophene as novel high homologs of tellurophene
AUTHOR(S): Inoue, Shinobu; Jigami, Tetsuya; Nozoe, Hiroshi; Otsubo, Tetsuo; Ogura, Fumio
CORPORATE SOURCE: Faculty Engineering, Hiroshima Univ., Higashi-Hiroshima, 724, Japan
SOURCE: Tetrahedron Letters (1994), 35(43), 8009-12
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

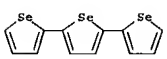


I

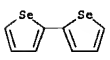
AB The title heterocyclic compds. (e.g., I) were prepared from tellurophene, and their spectroscopic and electrochem. properties were systematically compared together with those of other chalcogenophene congeners. Their electropolymns. gave poly(bitellurophene) and poly(tertellurophene) as black films, which both had higher elec. conductivities than poly(tellurophene) similarly obtained.
IT **6239-48-1**, 2,2'-Biselenophene **67308-30-9**, 2,2':5',2''-Terselenophene
RL: PRP (Properties)
(comparison of chalcogenophene oxidation potentials)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



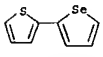
RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)



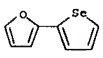
L4 ANSWER 30 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:457597 CAPLUS
DOCUMENT NUMBER: 121:57597
TITLE: Electronic Structure of Bichalcophenes
AUTHOR(S): Novak, Igor; Ng, Siu Choon; Chua, Yek Tann; Mok, Chup Yew; Huang, Hsing Hua
CORPORATE SOURCE: Department of Chemistry, National University of Singapore, Singapore, 0511, Singapore
SOURCE: Journal of Physical Chemistry (1994), 98(20), 5240-3
CODEN: JPCHAX; ISSN: 0022-3654
DOCUMENT TYPE: Journal
LANGUAGE: English
AB He I and He II photoelectron spectra of some isomeric bichalcophenes containing Se,e.g., 2,2'-biselenophene, were recorded. The electronic structure was analyzed and spectra assigned from empirical considerations: band contours, He I/He II intensity variations, and correlations with spectra of related mols. Semiempirical MO calcns. were used to estimate interring torsional barriers. The spectra indicate various interactions taking place among thiophene, furan, and selenophene π orbitals. The relation between electronic structure and formation of novel polymer materials is discussed.
IT **6239-48-1P**, 2,2'-Biselenophene **119507-82-3P** **130236-56-5P** **156210-23-0P** **156210-24-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and electronic structure of)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 119507-82-3 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)

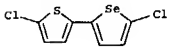


RN 130236-56-5 CAPLUS
CN Furan, 2-selenophene-2-yl- (9CI) (CA INDEX NAME)

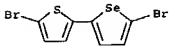


RN 156210-23-0 CAPLUS
CN Thiophene, 2-chloro-5-(5-chloroselenophene-2-yl)- (9CI) (CA INDEX NAME)

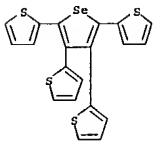
L4 ANSWER 30 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



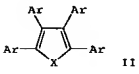
RN 156210-24-1 CAPLUS
CN Thiophene, 2-bromo-5-(5-bromoselenophene-2-yl)- (9CI) (CA INDEX NAME)



L4 ANSWER 31 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



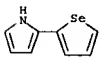
L4 ANSWER 31 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:495689 CAPLUS
DOCUMENT NUMBER: 119:95689
TITLE: Preparation of tetraarylthiophenes and tetraarylselenophenes by reactions of diarylacetylenes with elemental sulfur and selenium
AUTHOR(S): Sawada, Kanji; Choi, Keun Soo; Kuroda, Masami; Taniguchi, Tetsuya; Ishii, Akihiko; Hoshino, Masamatsu; Nakayama, Juzo
CORPORATE SOURCE: Fac. Sci., Saitama Univ., Urawa, 338, Japan
SOURCE: Sulfur Letters (1993), 15(6), 273-83
CODEN: SULED2; ISSN: 0278-6117
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 119:95689
GI



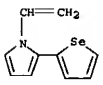
II

AB A series of diarylacetylenes, ArC.tplbond.CAr (I, Ar = Ph, 4-ClC6H4, 1-, 2-naphthyl, 2-thienyl, etc.), react with elemental sulfur, when heated at 200-210° in benzene in a stainless steel autoclave or in refluxing o-dichlorobenzene, to afford the corresponding tetraarylthiophenes II (X = S) in good yields. The reaction of I with elemental selenium under similar conditions also provides a practical synthesis of tetraarylselenophenes II (X = Se). Heating diphenylacetylene with sulfur or selenium neat also gives rise to tetraphenylthiophene or tetraphenylselenophene in good yields and provides a very convenient synthesis of these compds. in larger quantities.
IT **144687-60-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 144687-60-5 CAPLUS
CN Thiophene, 2,2',2'',2'''-(2,3,4,5-selenophenetetrayl)tetrakis- (9CI) (CA INDEX NAME)

L4 ANSWER 32 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:147677 CAPLUS
DOCUMENT NUMBER: 118:147677
TITLE: Synthesis of 2-(2-selenophenyl)pyrrole from methyl 2-selenophenyl ketoxime and acetylene
AUTHOR(S): Mikhaleva, A. I.; Nesterenko, R. N.; Vasil'tsov, A. M.; Kalabin, G. A.; Deryagina, E. N.; Korchevin, N. A.; Golovanova, N. I.
CORPORATE SOURCE: Irkutsk. Inst. Org. Khim., Irkutsk, 664033, Russia
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1992), (5), 708-10
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 118:147677
AB The title Trofimov cyclization reaction afforded 10% 2-(2-selenophenyl)pyrrole (I) + 2% of its N-vinyl derivative The starting ketoxime was a 1:1 syn:anti mixture; ketoxime remaining at the end of reaction was 77% syn, indicating predominant or exclusive cyclization of the anti isomer. The π-electrons are shifted toward the selenophene ring in I.
IT **146580-93-0P 146580-94-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 146580-93-0 CAPLUS
CN 1H-Pyrrole, 2-selenophene-2-yl- (9CI) (CA INDEX NAME)



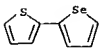
RN 146580-94-1 CAPLUS
CN 1H-Pyrrole, 1-ethenyl-2-selenophene-2-yl- (9CI) (CA INDEX NAME)



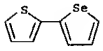
L4 ANSWER 33 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:111812 CAPLUS
DOCUMENT NUMBER: 118:111812
TITLE: Electrochemical synthesis and study of polyselenienylthiophene
AUTHOR(S): Peulon, Valerie; Barbey, Gerard; Outurquin, Francis; Paulmier, Claude
CORPORATE SOURCE: Lab. Electrochim. Interfac. Chim. Anal., Univ. Haute-Normandie, Mont-Saint-Aignan, 76134, Fr.
SOURCE: Synthetic Metals (1993), 53(2), 115-26
CODEN: SYMEDZ; ISSN: 0379-6779
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors describe the electrochem. preparation and behavior of polyselenienylthiophene (PSeT, poly(2-selenophene-2-yl)thiophene) in actonitrile. The redox properties of the polymer are examined in cyclic voltammetry and chronocoulometry. Atomic absorption and chronocoulometry are used to establish the maximum oxidation state or the doping level of this polymer. Polyselenienylthiophene has very promising applications.
IT **127475-91-6**, Poly[(2-selenophene-2-yl)thiophene]
RL: PRP (Properties)
(electrochem. preparation and elec. conductivity and electrochem. redox reaction of)
RN 127475-91-6 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

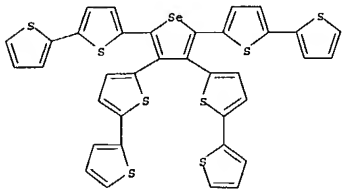
CRN 119507-82-3
CMF C8 H6 S Se



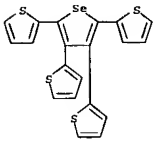
IT **119507-82-3**, 2-(Selenophene-2-yl)thiophene
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymerization of, electrochem., in acetonitrile containing lithium perchlorate)
RN 119507-82-3 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)



L4 ANSWER 34 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

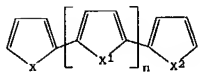


L4 ANSWER 34 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:651168 CAPLUS
DOCUMENT NUMBER: 117:251168
TITLE: Tetra-2-thienyl- and tetrakis(5,2'-bithiophen-2-yl)thiophenes and -selenophenes
AUTHOR(S): Nakayama, Juzo; Sawada, Kanji; Ishii, Akihiko; Hoshino, Masamatsu
CORPORATE SOURCE: Fac. Sci., Saitama Univ., Urawa, 338, Japan
SOURCE: Heterocycles (1992), 34(8), 1487-90
CODEN: HTCYAM; ISSN: 0385-5414
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 117:251168
AB Heating a mixture of RC.tplbond.CR (R = 2-thienyl) and elemental selenium in benzene at 220-225° for 9 h in a stainless steel autoclave affords tetrathienylselenophene I in 65% yield. In similar ways, heating a mixture of bis(5,2'-bithiophen-2-yl)acetylene (II) and elemental sulfur or selenium gives tetrakis(5,2'-bithiophen-2-yl)thiophene III (X = S) or -selenophene III (X = Se), resp., in satisfactory yields.
IT **144687-60-5P 144687-63-8P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and oxidation potential of)
RN 144687-60-5 CAPLUS
CN Thiophene, 2,2',2'',2'''-(2,3,4,5-selenophenetetrayl)tetrakis- (9CI) (CA INDEX NAME)



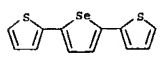
RN 144687-63-8 CAPLUS
CN 2,2'-Bithiophene, 5,5'',5'''',5''''''-(2,3,4,5-selenophenetetrayl)tetrakis- (9CI) (CA INDEX NAME)

L4 ANSWER 35 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:591079 CAPLUS
DOCUMENT NUMBER: 113:191079
TITLE: Synthesis of mixed oligomeric heteroarylenes containing unsubstituted furan, thiophene, and selenophene rings. Their uv spectra and oxidation potentials
AUTHOR(S): Shabana, R.; Galal, A.; Mark, H. B., Jr.; Zimmer, Hans; Gronowitz, S.; Hoernfeldt, A. B.
CORPORATE SOURCE: Edison Sensor Technol. Cent., Univ. Cincinnati, Cincinnati, OH, 45221, USA
SOURCE: Phosphorus, Sulfur and Silicon and the Related Elements (1990), 48(1-4), 239-44
CODEN: PSSLEC; ISSN: 1042-6507
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:191079
GI

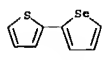


I

AB Mixed oligomeric 2,2'- and 2,2'-5',2''-unsubstituted furan-, thiophene-, and selenophene-containing heteroarylenes I (X, X1, X2 = O, S, Se; n = 0, 1) were synthesized. Thus, 2,5-dibromoselenophene was treated with Pd(PPh3)4 in MeOCH2CH2OMe, and then 2-selenopheneboronic acid followed by 1 N NaHCO3 to give 22% I (X = X1 = X2 = Se, n = 1). The UV spectra and oxidation potentials of I are discussed.
IT **51678-15-0 119507-82-3**
RL: PRP (Properties)
(UV spectra and oxidation potential of)
RN 51678-15-0 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)

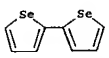


RN 119507-82-3 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)

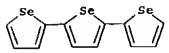


IT **6239-48-1P**, 2,2'-Biselenophene
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

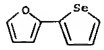
L4 ANSWER 35 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(prepn. and oxidn. potential of)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



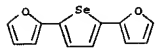
IT **67308-30-9P**, 2,5-(2-Selenienyl)selenophene **130236-56-5P**
130236-57-6P 130236-58-7P, 2,5-Bis(2-selenienyl)thiophene **130236-59-8P**, 2,5-Bis(2-selenienyl)furan
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, UV and oxidation potential of)
RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)



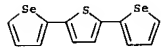
RN 130236-56-5 CAPLUS
CN Furan, 2-selenophene-2-yl- (9CI) (CA INDEX NAME)



RN 130236-57-6 CAPLUS
CN Furan, 2,2'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)

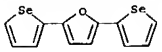


RN 130236-58-7 CAPLUS
CN Thiophene, 2,5-diselenophene-2-yl- (9CI) (CA INDEX NAME)



RN 130236-59-8 CAPLUS
CN Furan, 2,5-diselenophene-2-yl- (9CI) (CA INDEX NAME)

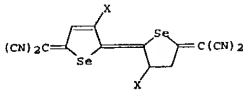
L4 ANSWER 35 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



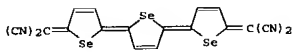
L4 ANSWER 36 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:450973 CAPLUS
DOCUMENT NUMBER: 113:50973
TITLE: Polydihydroselenophenes and conductive charge-transfer complexes
INVENTOR(S): Ogura, Fumio; Otsubo, Tetsuo; Aso, Yoshio; Yui, Koji
PATENT ASSIGNEE(S): Diso Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01301675	A2	19891205	JP 1988-133707	19880530
JP 06004622	B4	19940119		
PRIORITY APPLN. INFO.:			JP 1988-133707	19880530

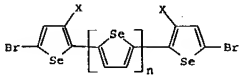
OTHER SOURCE(S): MARPAT 113:50973
GI



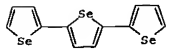
I



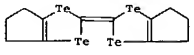
II



III



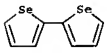
IV



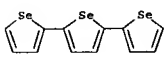
V

AB Polydihydroselenophenes I (X = H, halo; Se atoms are in trans-configuration) and II and their charge transfer complexes, dibromopolyzelenophenes (III; n = 0, 1; X = H when n = 1) and terselenophene (IV) are claimed. Lightwt. elec. conductors can be prepared
Thus, I (X = Br), prepared by 3-step reaction from biselenophene, was treated with V to give a 1:1 charge transfer complex having high conductivity
IT **6239-48-1**, 2,2'-Biselenophene
RL: RCT (Reactant); RACT (Reactant or reagent)
(bromination of, for charge transfer complex)

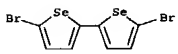
L4 ANSWER 36 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



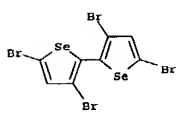
IT **67308-30-9P**, 2,2':5',2''-Terselenophene
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and bromination of, for charge transfer complex)
RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)



IT **116886-64-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, for charge transfer complex)
RN 116886-64-7 CAPLUS
CN 2,2'-Biselenophene, 5,5'-dibromo- (9CI) (CA INDEX NAME)

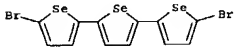


IT **116907-04-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with cyanoethylene oxide, for charge transfer complex)
RN 116907-04-1 CAPLUS
CN 2,2'-Biselenophene, 3,3',5,5'-tetrabromo- (9CI) (CA INDEX NAME)



IT **116886-65-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with malononitrile, for charge transfer complex)

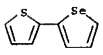
L4 ANSWER 36 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 116886-65-8 CAPLUS
CN 2,2':5',2''-Terselenophene, 5,5''-dibromo- (9CI) (CA INDEX NAME)



L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:413584 CAPLUS
DOCUMENT NUMBER: 113:13584
TITLE: Electrochemical synthesis, characterization and spectroelectrochemical studies of some conducting poly(heterolene) films
AUTHOR(S): Galal, Ahmed; Cunningham, David D.; Karagozler, Ali E.; Lewis, Edmund T.; Nkansah, Asare; Burkhardt, Armin; Ataman, O. Y.; Zimmer, Hans; Mark, Harry B., Jr.
CORPORATE SOURCE: Dep. Chem., Univ. Cincinnati, Cincinnati, OH, 45221-0172, USA
SOURCE: Proceedings - Electrochemical Society (1990), 90-2(Proc. Symp. Electrochromic Mater., 1989), 179-91
CODEN: PESODO; ISSN: 0161-6374
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Conducting poly(heterolene) films were galvanostatically synthesized on optically transparent SnOx electrodes (OTE). UV-visible spectroelectrochem. has been employed to determine the formal potentials and n-values of the polymeric compds. The effects of the number of rings in the starting compds., the nature of the heteroatom, the substitutions in the monomeric ring and the nature of electrolyte on the spectral and electrochem. behavior of the polymers were investigated. The morphol. of the polymer films over the OTE was examined using the scanning electron microscope technique, revealing substantial differences to that of the film formed on Pt surfaces.
IT **127475-91-6**
RL: PRP (Properties)
(electrochem. preparation and spectra and elec. oxidation potential of)
RN 127475-91-6 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)-, homopolymer (9CI) (CA INDEX NAME)

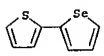
CM 1

CRN 119507-82-3
CMF C8 H6 S Se

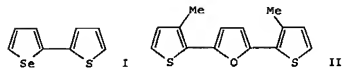


IT **119507-82-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymerization of, electrochem., on platinum or tin dioxide in acetonitrile containing tetrabutylammonium tetrafluoroborate or tetrabutylammonium hexafluorophosphate)
RN 119507-82-3 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)

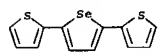
L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



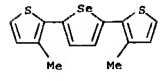
L4 ANSWER 38 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:35596 CAPLUS
DOCUMENT NUMBER: 112:35596
TITLE: Synthesis of mixed oligomeric heteroarylenes containing furan, thiophene, and selenophene rings; their UV spectra and oxidation potentials
AUTHOR(S): Zimmer, Hans; Shabana, R.; Galal, A.; Mark, H. B., Jr.; Gronowitz, S.; Hoernfeldt, A. B.
CORPORATE SOURCE: Dep. Chem., Univ. Cincinnati, Cincinnati, OH, 45221, USA
SOURCE: Phosphorus, Sulfur and Silicon and the Related Elements (1989), 42(3-4), 171-6
CODEN: PSSLEC; ISSN: 1042-6507
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:35596
GI



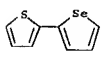
AB Eleven mixed oligomeric five-membered heteroarylenes, e.g. I and II, have been prepared by the cross-coupling reaction of the Grignard reagents derived of the appropriately substituted thiophenes with either the 2-bromoheteroarylenes or the 2,5-dibromoheteroarylenes derived of furan, thiophene, and/or selenophene. The UV spectra and oxidation potential of the products are discussed on the basis of co-planarity.
IT **51678-15-0P 119485-25-5P 119507-82-3P**
119507-83-4P 119507-85-6P 119507-86-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, proton NMR, UV spectra, and oxidation potential of)
RN 51678-15-0 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)



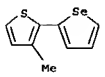
RN 119485-25-5 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis[3-methyl- (9CI) (CA INDEX NAME)



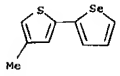
L4 ANSWER 38 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 119507-82-3 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)



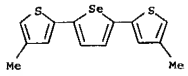
RN 119507-83-4 CAPLUS
CN Thiophene, 3-methyl-2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)



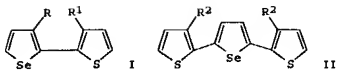
RN 119507-85-6 CAPLUS
CN Thiophene, 4-methyl-2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)



RN 119507-86-7 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis[4-methyl- (9CI) (CA INDEX NAME)



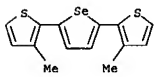
L4 ANSWER 39 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:134566 CAPLUS
DOCUMENT NUMBER: 110:134566
TITLE: Synthesis of mixed oligomeric heteroarylenes containing thiophene and selenophene rings. Their UV spectra and oxidation potentials
AUTHOR(S): Shabana, R.; Galal, A.; Mark, Harry B., Jr.; Zimmer, Hans; Gronowitz, Salo; Hoernfeldt, A. B.
CORPORATE SOURCE: Dep. Chem., Univ. Cincinnati, Cincinnati, OH, 45221-0172, USA
SOURCE: Journal of the Chemical Society, Chemical Communications (1988), (15), 988-9
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:134566
GI



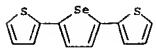
AB Mixed oligomers containing thiophene and selenophenone rings, e.g., I (R = R1 = H, Me; R = Me, R1 = H) and II (R2 = H, Me) were synthesized. Their UV spectra and oxidation potentials were determined and discussed in terms of coplanarity of the rings and the +/- effect of the Me substituent.
IT **119485-26-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and conductivity of)
RN 119485-26-6 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis[3-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

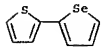
CRN 119485-25-5
CMF C14 H12 S2 Se



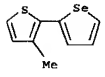
L4 ANSWER 39 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
IT **51678-15-0P 119507-82-3P 119507-83-4P**
119507-84-5P 119507-85-6P 119507-86-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, UV absorption, and oxidation potential of)
RN 51678-15-0 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)



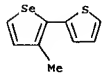
RN 119507-82-3 CAPLUS
CN Thiophene, 2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)



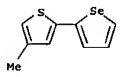
RN 119507-83-4 CAPLUS
CN Thiophene, 3-methyl-2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)



RN 119507-84-5 CAPLUS
CN Thiophene, 2-(3-methylselenophene-2-yl)- (9CI) (CA INDEX NAME)

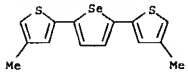


RN 119507-85-6 CAPLUS
CN Thiophene, 4-methyl-2-(selenophene-2-yl)- (9CI) (CA INDEX NAME)

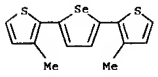


RN 119507-86-7 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis[4-methyl- (9CI) (CA INDEX NAME)

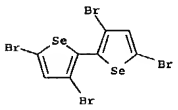
L4 ANSWER 39 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



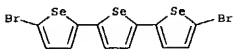
IT **119485-25-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, properties, and polymerization of)
RN 119485-25-5 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis[3-methyl- (9CI) (CA INDEX NAME)



L4 ANSWER 40 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:561360 CAPLUS
DOCUMENT NUMBER: 109:161360
TITLE: Extensively conjugated homologs of selenophene-TCNQ as new electron acceptors
AUTHOR(S): Yui, Koji; Aso, Yoshio; Otsubo, Tetsuo; Ogura, Fumio
CORPORATE SOURCE: Fac. Eng., Hiroshima Univ., Higashi-Hiroshima, 724, Japan
SOURCE: Chemistry Letters (1988), (7), 1179-82
CODEN: CMLTAG; ISSN: 0366-7022
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 5,5'-Bis(dicyanomethylene)-5,5'-dihydro-2,2'-biselenophene, its 3,3'-dibromo derivative, and 5,5''-bis(dicyanomethylene)-5,5''-dihydro-2,2':5',2''-terselenophene were synthesized as extensively conjugated homologs of selenophene-TCNQ. The 3,3'-dibromo compound possesses a considerably better accepting character than selenophene-TCNQ or the other extended homologs and can form highly conductive mol. complexes.
IT **116907-04-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of, for conductor preparation)
RN 116907-04-1 CAPLUS
CN 2,2'-Biselenophene, 3,3',5,5'-tetrabromo- (9CI) (CA INDEX NAME)

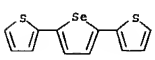


IT **116886-65-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of, in conductor preparation)
RN 116886-65-8 CAPLUS
CN 2,2':5',2''-Terselenophene, 5,5''-dibromo- (9CI) (CA INDEX NAME)

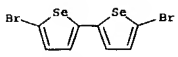


IT **116886-64-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of, in preparation of conductor)
RN 116886-64-7 CAPLUS

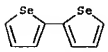
L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1987:138828 CAPLUS
DOCUMENT NUMBER: 106:138828
TITLE: 'Substitutional alloys' of organic polymeric conductors
AUTHOR(S): Ferraris, John P.; Skiles, Gary D.
CORPORATE SOURCE: Programs Chem., Univ. Texas, Dallas, Richardson, TX, 75083-0688, USA
SOURCE: Polymer (1987), 28(2), 179-82
CODEN: POLMAG; ISSN: 0032-3861
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Elec. conducting copolymers of thiophene with pyrrole, N-methylpyrrole, and furan, whose conductivities vary as a function of the heteroatom composition were prepared The use of a tri-ring monomer allows the production of these 'substitutional alloys' with a controlled heteroatom composition and formally known sequence distribution.
IT **51678-15-0**
RL: PRP (Properties)
(peak oxidation potential of)
RN 51678-15-0 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)



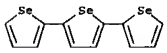
L4 ANSWER 40 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CN 2,2'-Biselenophene, 5,5'-dibromo- (9CI) (CA INDEX NAME)



IT **6239-48-1**, 2,2'-Biselenophene
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bromosuccinimide in conductor preparation)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **67308-30-9**, 2,2':5',2''-Terselenophene
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, with bromosuccinimide in conductor preparation)
RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)



L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:495018 CAPLUS
DOCUMENT NUMBER: 103:95018
TITLE: Polymeric conducting material from polyselenophene and its use in electrochemical cells
INVENTOR(S): Gazard, Maryse; Montheard, Jean Pierre; Champagne, Monique; Dubois, Jean Claude
PATENT ASSIGNEE(S): Thomson CSF S. A., Fr.
SOURCE: Fr. Demande, 13 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

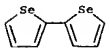
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2554133	A1	19850503	FR 1983-17314	19831028
FR 2554133	B1	19851227		

PRIORITY APPLN. INFO.: FR 1983-17314 19831028
GI

I

AB Organic conductive materials obtained by electrochem. polymerization of at least 1 monomer of a base of substituted or nonsubstituted selenophene type are rendered conductive by incorporating ions (e.g. BF4-) in them during the polymerization These materials are used in electrochem. cells designed as electrochem. recording apparatus or batteries. The polymer corresponds to the general formula (My+X-y)n), where X- is an anion provided by the electrolyte used in the polymerization, y is the proportion of anion with respect to 1 mol of the monomer M, and n is the degree of polymerization The monomer (I; R and R1 are H or alkyl, alkoxyl, aryl or substituted aryl groups) is a selenophene in which the preferred monomer has R = H and R1 = Me or Ph. Electrochem. polymerization occurs by the intermediary of a dimer. The anion can be ClO4-, BF4-, PF6-, I-, or Br-. An electrochem. cell consists of an electrolyte solution with an anode covered by a layer of the doped polymeric material and a counter electrode. The anode and the cell are transparent.
The electrochem. cell can be used to store and restore energy by oxidation-reduction In an example, selenophene can be prepared by the well-known method (S. Gronowitz, 1976) of passing acetylene at 450° over a mixture of Al and Se. The electrochem. oxidation potential of

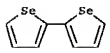
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(.apprx.2 V) is higher than the oxidn. potential of the solvent ordinarily
used (MeCN, methylene chloride, etc). This monomer can then be used to prep. the dimer by the action of I in the presence of HgO, followed by a coupling reaction of the 2-iodoselenophene in the presence of Cu. The 2,2'-biselenophene (10-2 mol/L) and Et4NBF4 (10-1 mol/L) in 1 L of MeCN are electrolyzed in a cell using e.g. a Pt sheet anode and a Pt wire cathode at c.d. 150 μA/cm2 and voltage >0.9 V. At the end of 1 min of electrolysis, a film of the polymer .apprx.450 Å thick is recovered contg. BF4- responsible for the cond. (.apprx.10-3 Ω-1-cm-1) of the polymer.
IT **6239-48-1P**
RL: PREP (Preparation)
(preparation of, by coupling reaction of iodoselenophene in presence of copper)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



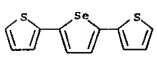
L4 ANSWER 43 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:158731 CAPLUS
DOCUMENT NUMBER: 102:158731
TITLE: Influence of 3-4 substitutions on properties of five-membered polyheterocycles
AUTHOR(S): Bureau, J. M.; Gazard, M.; Champagne, M.; Dubois, J. C.; Tourillon, G.; Garnier, F.
CORPORATE SOURCE: Lab. Cent. Rech., Thomson-CSF, Orsay, 91401, Fr.
SOURCE: Molecular Crystals and Liquid Crystals (1985), 118(1-4), 235-9
CODEN: MCLCA5; ISSN: 0026-8941
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Thin films of 3-4 substituted 5-membered polyheterocycles derived from pyrrole and thiophene were electrochem. synthesized, showing reversible electrochem. oxidation and reduction processes, and conductivities varying between 10-4 and 102 Ω-1cm-1. The absorption spectra of their doped and undoped states and their switching time and lifetime make some of these polymers interesting for electrochromic applications.
IT **95831-28-0**
RL: USES (Uses)
(elec. and optical properties of thin films of)
RN 95831-28-0 CAPLUS
CN 2,2'-Biselenophene, homopolymer (9CI) (CA INDEX NAME)

CM 1

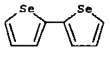
CRN 6239-48-1
CMF C8 H6 Se2



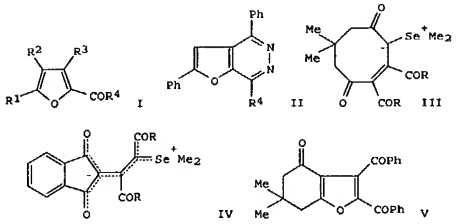
L4 ANSWER 44 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:419796 CAPLUS
DOCUMENT NUMBER: 101:19796
TITLE: Comparison of the phototoxicity of α-terthienyl with that of a selenium and of an oxygen analog
AUTHOR(S): Garcia, P. J.; Yamamoto, E.; Abramowski, Z.; Downum, K.; Towers, G. H. N.
CORPORATE SOURCE: Bot. Dep., Univ. British Columbia, Vancouver, BC, V6T 1W5, Can.
SOURCE: Photochemistry and Photobiology (1984), 39(4), 521-4
CODEN: PHCBAP; ISSN: 0031-8655
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two analogs of α-terthienyl, namely 2,5-di(2'-thienyl)selenophene and 2,5-di(2'-thienyl)furan have been prepared and their phototoxicities toward several microorganisms have been compared. Dose response studies with Escherichia coli indicate that α-terthienyl is more active than these analogs. α-Terthienyl was the most effective of the 3 compds. in the photoinactivation of yeast alc. dehydrogenase. Diagnostic tests showed the participation of singlet O in the photosensitization to different extents by these 3 thiophenes.
IT **51678-15-0P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and phototoxicity of, to microorganism)
RN 51678-15-0 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)



L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:179132 CAPLUS
DOCUMENT NUMBER: 98:179132
TITLE: Nickel-catalyzed synthesis of arylacetic esters from arylzinc chlorides and ethyl bromoacetate
AUTHOR(S): Klingstedt, T.; Frejd, T.
CORPORATE SOURCE: Org. Chem. 1, Chem. Cent., Univ. Lund, Lund, S-220 07, Swed.
SOURCE: Organometallics (1983), 2(5), 598-600
CODEN: ORGND7; ISSN: 0276-7333
DOCUMENT TYPE: Journal
LANGUAGE: English
AB RCH2CO2Et (R = Ph, 2-MeC6H6, 2-MeOC6H4, 2-furyl, 2-thienyl, 2-selenienyl) were prepared in 38-60% yields by coupling RZnCl with BrCH2CO2Et in the presence of catalytic amts. of bis(acetylacetonato)nickel(II)-R1Ph2P (R1 = Ph, cyclohexyl). Also formed were 13-15% the corresponding R2. No coupling occurred with 3-pyridylzinc chloride.
IT **6239-48-1P**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, during reaction of arylzinc chlorides with Et bromoacetate)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)

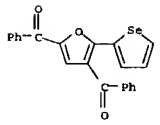


L4 ANSWER 46 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:179122 CAPLUS
DOCUMENT NUMBER: 98:179122
TITLE: Reaction of selenonium ylides with activated acetylenes
AUTHOR(S): Magdesieva, N. N.; Kyandzhetsian, R. A.; Gordeev, M. F.
CORPORATE SOURCE: Mosk. Gos. Univ., Moscow, USSR
SOURCE: Zhurnal Organicheskoi Khimii (1982), 18(12), 2514-23
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 98:179122
GI

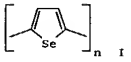


AB Treatment of Me2Se+CH2COR Br- (R = Ph, 2-thienyl, 2-selenenyl) with BzC.tplbond.CBz in the presence of base gave mixts. containing 28-51% I (R1 = Ph, R2 = H, R3 = Bz, R4 = Ph, 2-thienyl, 2-selenenyl) and 10-43% I (R1 = Ph, R2 = Bz, 2-thenoyl, R3 = H, R4 = Ph; R1 = 2-selenenyl, R2 = Bz, R3 = H, R4 = Ph). Cyclocondensation of the 2-aryl-4,5-diaroyl derivs. with N2H4 gave 25-75% II (R4 as above). Treatment of the dimethylselenonium ylides of dimedon and indandione with BzC.tplbond.CBz or MeO2CC.tplbond.CCO2Me gave new selenonium ylides via ring enlargement III (dimedon ylide) or 1,3-migration of the onium group IV (indandione ylide). Dimedon ylide and BzC.tplbond.CBz also gave V.
IT **85388-87-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 85388-87-0 CAPLUS
CN Methanone, (5-selenophene-2-yl-2,4-furandiyl)bis[phenyl- (9CI) (CA INDEX NAME)

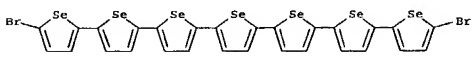
L4 ANSWER 46 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



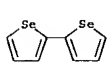
L4 ANSWER 47 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1981:498406 CAPLUS
DOCUMENT NUMBER: 95:98406
TITLE: Polymerization of aromatic nuclei. XXVIII. Synthesis and properties of poly(2,5-selenienylene)
AUTHOR(S): Bezoari, Massimo D.; Kovacic, Peter; Gronowitz, Salo; Hoernfeldt, Anna Britta
CORPORATE SOURCE: Dep. Chem., Univ. Wisconsin, Milwaukee, WI, 53201, USA
SOURCE: Journal of Polymer Science, Polymer Letters Edition (1981), 19(7), 347-53
CODEN: JPYBAN; ISSN: 0360-6384
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



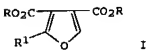
AB Poly(2,5-selenienylene) (I) [78618-10-7] is prepared from 2,5-dibromoselenophene by conversion to a Grignard reagent and polymerization in the presence of Ni(II) salt or ClCH2CH:CHCH2Cl (II) [764-41-0]. Ni(II) acetylacetonate [3264-82-2] and bipyridyldichloronickel [22775-90-2] gave I in better yield and with d.p. closer to the maximum value of 6-12 than II, due to formation of cross-coupled product with II. ESR spectra showed that the radical concns. in I are similar to those in poly(2,5-thienylene) and poly(p-phenylene).
IT **78598-37-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, in presence of bipyridyl dichloronickel)
RN 78598-37-5 CAPLUS
CN 1,1':5',1'':5'',1''':5''',1'''':5'''',1''''':5''''',1'''''':5'''''',1''''''. Septiselenophene, 5,5''''''-dibromo- (9CI) (CA INDEX NAME)



L4 ANSWER 48 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1980:197806 CAPLUS
DOCUMENT NUMBER: 92:197806
TITLE: Conformational study of 2,2'-biselenophene partially oriented in a nematic liquid crystal phase by PMR spectra including selenium-77 satellites
AUTHOR(S): Chidichimo, G.; Lelj, F.; Longeri, M.; Russo, N.; Veracini, C. A.
CORPORATE SOURCE: Dip. Chim., Univ. Calabria, Cosenza, 87030, Italy
SOURCE: Chemical Physics Letters (1979), 67(2-3), 384-7
CODEN: CHPLBC; ISSN: 0009-2614
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Different models for the conformational equilibrium of 2,2'-biselenophene are examined in order to reproduce the DH-H and DSe-H direct dipolar couplings obtained from the NMR in liquid crystal solvents. The results allow the rigorous exclusion of various conformational possibilities and confine the conformation to an equilibrium between 2 twisted conformers; the transoid one is most abundant.
IT **6239-48-1**
RL: PRP (Properties)
(proton NMR of, in nematic liquid crystal phase, conformation in relation to)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)

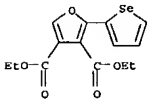


L4 ANSWER 49 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1979:420212 CAPLUS
DOCUMENT NUMBER: 91:20212
TITLE: Synthesis of trisubstituted furans
AUTHOR(S): Magdesieva, N. N.; Le Nguyen Nghi; Koloskova, N. M.
CORPORATE SOURCE: Mosk. Gos. Univ., Moscow, USSR
SOURCE: Zhurnal Organicheskoi Khimii (1979), 15(3), 609-12
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 91:20212
GI

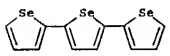


I

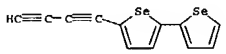
AB Trisubstituted furans I (R = Me, Et; R1 = 2-thienyl, 2-furyl, selenophen-2-yl) were prepared in 28-38% yield by reaction of Me2Se+CH2COR1 Br- with RO2CC.tplbond.CCO2R. The spectral data for I was tabulated.
IT **70585-76-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and spectra of)
RN 70585-76-1 CAPLUS
CN 3,4-Furandicarboxylic acid, 2-selenophene-2-yl-, diethyl ester (9CI) (CA INDEX NAME)



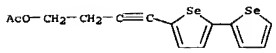
L4 ANSWER 50 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1978:503825 CAPLUS
DOCUMENT NUMBER: 89:103825
TITLE: Biogenesis of thiophene and selenophene derivatives in Liatris species and Tagetes erecta
AUTHOR(S): Hasnain, S. Nazrul; Athar, H. S. A.; Ahmad, S. I.
CORPORATE SOURCE: Dep. Biochem., Univ. Karachi, Karachi, Pak.
SOURCE: Pakistan Journal of Botany (1977), 9(1), 33-7
CODEN: PJBOB6; ISSN: 0556-3321
DOCUMENT TYPE: Journal
LANGUAGE: English
AB L-Selenophene (I)-75Se fed to T. erecta did not result in the formation of radioactive selenophenes, whereas using 75Se-Na2SeO3, terselenyl, 5-(3-buten-ynyl)-2,2'-biselenyl, 5-(4-acetoxy-1-butynyl)-2,2'-biselenyl, and 2-acetyl-3-hydroxy-5-(1-propynyl)selenophene were formed. Similarly Liatris incorporated the inorg. Se, but not I.
IT **67308-30-9 67308-31-0 67308-32-1**
RL: BIOL (Biological study)
(as selenium metabolite in Tagetes erecta and Liatris)
RN 67308-30-9 CAPLUS
CN 2,2':5',2''-Terselenophene (9CI) (CA INDEX NAME)



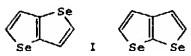
RN 67308-31-0 CAPLUS
CN 2,2'-Biselenophene, 5-(1,3-butadiynyl)- (9CI) (CA INDEX NAME)



RN 67308-32-1 CAPLUS
CN 3-Butyn-1-ol, 4-[2,2'-biselenophen]-5-yl-, acetate (9CI) (CA INDEX NAME)

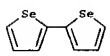


L4 ANSWER 51 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1977:601375 CAPLUS
DOCUMENT NUMBER: 87:201375
TITLE: On the reaction between acetylene and selenium
AUTHOR(S): Gronowitz, S.; Konar, A.; Hoernfeldt, A. B.
CORPORATE SOURCE: Chem. Cent., Univ. Lund, Lund, Swed.
SOURCE: Chemica Scripta (1976), 10(4), 159-64
CODEN: CSRPB9; ISSN: 0004-2056
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



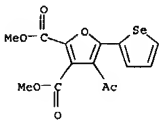
I II

AB Selenoloselenophenes I and II were prepared starting from Li derivs. of 2-(3-bromo-2-selenienyl)-1,3-dioxolane and 2-(3-selenienyl)-1,3-dioxolane, resp., by reaction with Se and ClCH2CO2Me followed by Dieckmann cyclization. Only I was detected among the products of the reaction between Se and acetylene. In addition, about 30 other compds. were identified, for example 2- and 3-alkylselenophenes, 2- and 3-alkylselenoselenophenes, biselenienyls, benzo[b]selenophene, tricyclic-fused systems, and 2-methyl-1,3-diselenacyclopent-4-ene. The syntheses of some of the above-products are described.
IT **6239-48-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)

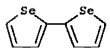


L4 ANSWER 52 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1974:95836 CAPLUS
DOCUMENT NUMBER: 80:95836
TITLE: Selenium heterocycles. XII. Heat-induced transformation of 1,2,3-selenadiazoles to disubstituted selenophenes
AUTHOR(S): Lalezari, I.; Shafiee, A.; Rabet, F.; Yalpani, M.
CORPORATE SOURCE: Fac. Pharm., Univ. Tehran, Teheran, Iran
SOURCE: Journal of Heterocyclic Chemistry (1973), 10(6), 953-5
CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 4-Aryl-1,2,3-selenadiazoles on heating afforded 2,5-diarylselenophenes and small quantities of 2,4-diarylseneophenes. Monoarylacetylenes and Se behaved similarly. Phenylacetylene and S gave 2,4-diphenylthiophene. Mechanistic aspects of these reactions are discussed.
IT **51678-15-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 51678-15-0 CAPLUS
CN Thiophene, 2,2'-(2,5-selenophenediyl)bis- (9CI) (CA INDEX NAME)

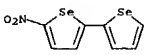
L4 ANSWER 53 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1974:70623 CAPLUS
DOCUMENT NUMBER: 80:70623
TITLE: Selenonium ylides. III. Synthesis of tetrasubstituted furans
AUTHOR(S): Magdesieva, N. N.; Kyandzhetsian, R. A.; Danilenko, V. A.
CORPORATE SOURCE: Mosk. Gos. Univ. im. Lomonosova, Moscow, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1973), (11), 1447-50
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB Tetrasubstituted furans I and II (R1 = Me, Ph, R2 = Me, Ph, 2-thienyl, 2-selenenyl) were prepared in 40-93% yields by boiling ylide III with MeO2CC.tplbond.CCO2Me in CHCl3 for 10 hr.
IT **51626-11-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 51626-11-0 CAPLUS
CN 2,3-Furandicarboxylic acid, 4-acetyl-5-(selenophene-2-ylcarbonyl)-, dimethyl ester (9CI) (CA INDEX NAME)



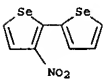
L4 ANSWER 54 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1972:513657 CAPLUS
DOCUMENT NUMBER: 77:113657
TITLE: Quantum-mechanical study on the stereochemistry of the isomeric bipyrroles bifurans, bithiophenes, thienylfurans, and biselenophenes
AUTHOR(S): Galasso, V.; Trinajstic, N.
CORPORATE SOURCE: Ist. Chim., Univ. Trieste, Trieste, Italy
SOURCE: Tetrahedron (1972), 28(16), 4419-29
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The most probable conformational arrangements of isomeric bipyrroles, bifurans, bithiophenes, thienyl-furans, and biselenophenes were investigated using the Extended Hueckel MO approach. The barrier heights between the syn and anti forms decrease sharply on going along the series bifurans, bithiophenes, and biselenophenes. The barrier height for the interconversion syn ⇔ anti follows the trend: 2,2' > 2,3' > 3,3'. The energy difference between the syn and anti conformers is small (except in the case of 2,2'-bifuran). Planar syn conformation is predicted more stable than anti for 2,2'-and 2,3'-isomers (except for 2,3'-biselenophene), while the 3,3'-isomers are predicted to have anti conformation more stable than syn. The tendency to assume a nonplanar conformation at the equilibrium is shown by 1,1'-bipyrrole, 2,3'-biselenophene, 3,3'-bithiophene and 3,3'-biselenophene. For the two energetically most favorable conformations of each mol. the charge distribution is calculated using the complete neglect of differential overlap/2 method.
IT **6239-48-1**
RL: PRP (Properties)
(rotational potential barrier in, mol. orbital calcn. in relation to)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



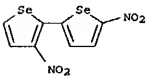
L4 ANSWER 55 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1971:42249 CAPLUS
DOCUMENT NUMBER: 74:42249
TITLE: Biselenophenes. IV. Nitration of 2,2'-biselenophene
AUTHOR(S): Dell'Erba, Carlo; Garbarino, Giacomo
CORPORATE SOURCE: Ist. Chim. Org., Univ. Genova, Genova, Italy
SOURCE: Gazzetta Chimica Italiana (1970), 100(8-9), 788-95
CODEN: GCITA9; ISSN: 0016-5603
DOCUMENT TYPE: Journal
LANGUAGE: Italian
GI For diagram(s), see printed CA Issue.
AB The 5-position is favored in the nitration of 2,2'-biselenophene (I). I gives mixts. of 5-nitro-2,2'-biselenophene (II) and 3-nitro-2,2'-biselenophene (III). The II-III ratio increases with temperature II and III are nitrated to give the 5,5'-dinitro (IV) and 3,5'-dinitro (V) derivs.
IT **30310-36-2P 30310-37-3P 30310-38-4P**
30310-39-5P 30310-40-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 30310-36-2 CAPLUS
CN 2,2'-Biselenophene, 5-nitro- (8CI) (CA INDEX NAME)



RN 30310-37-3 CAPLUS
CN 2,2'-Biselenophene, 3-nitro- (8CI) (CA INDEX NAME)

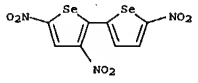


RN 30310-38-4 CAPLUS
CN 2,2'-Biselenophene, 3,5'-dinitro- (8CI) (CA INDEX NAME)

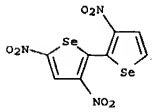


RN 30310-39-5 CAPLUS
CN 2,2'-Biselenophene, 3,5,5'-trinitro- (8CI) (CA INDEX NAME)

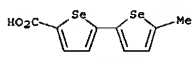
L4 ANSWER 55 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



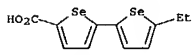
RN 30310-40-8 CAPLUS
CN 2,2'-Biselenophene, 3,3',5-trinitro- (8CI) (CA INDEX NAME)



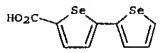
L4 ANSWER 56 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1971:34821 CAPLUS
DOCUMENT NUMBER: 74:34821
TITLE: Biselenophenes. III. Determination of the ionization constants of 5'-substituted 2,2'-bithiophene- and 2,2'-biselenophene-5-carboxylic acids
AUTHOR(S): Dell'Erba, Carlo; Spinelli, Domenico; Garbarino, Giacomo
CORPORATE SOURCE: Ist. Chim. Org., Univ. Genova, Genova, Italy
SOURCE: Gazzetta Chimica Italiana (1970), 100(8-9), 777-87
CODEN: GCITA9; ISSN: 0016-5603
DOCUMENT TYPE: Journal
LANGUAGE: Italian
GI For diagram(s), see printed CA Issue.
AB The transmission of electronic effects through 2,2'-bithiophenes (e.g. I) and 2,2'-biselenophenes (e.g. II) is similar to that of 4-biphenylcarboxylic acids (III). The σp values for the 5-substituted-2-thienyl and selenophene-2-yl groups vary between -0.03 and +0.29 for the I and between -0.03 and +0.24 for the II.
IT **30979-86-3 30979-87-4 30979-88-5 30979-89-6 30979-90-9 30979-91-0 30979-92-1 31119-50-3**
RL: PRP (Properties)
(ionization consts. of)
RN 30979-86-3 CAPLUS
CN [2,2'-Biselenophene]-5-carboxylic acid, 5'-methyl- (8CI) (CA INDEX NAME)



RN 30979-87-4 CAPLUS
CN [2,2'-Biselenophene]-5-carboxylic acid, 5'-ethyl- (8CI) (CA INDEX NAME)

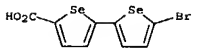


RN 30979-88-5 CAPLUS
CN [2,2'-Biselenophene]-5-carboxylic acid (8CI) (CA INDEX NAME)

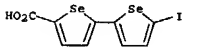


RN 30979-89-6 CAPLUS
CN [2,2'-Biselenophene]-5-carboxylic acid, 5'-bromo- (8CI) (CA INDEX NAME)

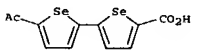
L4 ANSWER 56 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



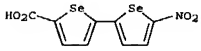
RN 30979-90-9 CAPLUS
CN [2,2'-Biselenophene]-5-carboxylic acid, 5'-iodo- (8CI) (CA INDEX NAME)



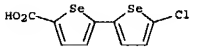
RN 30979-91-0 CAPLUS
CN [2,2'-Biselenophene]-5-carboxylic acid, 5'-acetyl- (8CI) (CA INDEX NAME)



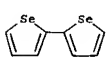
RN 30979-92-1 CAPLUS
CN [2,2'-Biselenophene]-5-carboxylic acid, 5'-nitro- (8CI) (CA INDEX NAME)



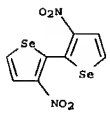
RN 31119-50-3 CAPLUS
CN [2,2'-Biselenophene]-5-carboxylic acid, 5'-chloro- (8CI) (CA INDEX NAME)



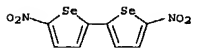
L4 ANSWER 57 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1970:21558 CAPLUS
DOCUMENT NUMBER: 72:21558
TITLE: Bithiophenes and biselenophenes
AUTHOR(S): Dell'Erba, Carlo
CORPORATE SOURCE: Univ. Genova, Genoa, Italy
SOURCE: Corsi e Seminari di Chimica, Consiglio Nazionale delle Ricerche e Fondazione F. Giordani (1968), (10), 175-6
CODEN: CSECB7; ISSN: 0579-0670
DOCUMENT TYPE: Journal
LANGUAGE: Italian
GI For diagram(s), see printed CA Issue.
AB 3,3'-Biselenophene (I) is prepared from 3-selenophene-yllithium and SnCl4 at -70°. 2,2'-Dinitro[3,3'-biselenophene]-4,4'-dicarboxylic acid is prepared and its optical isomerism examined. The halogenation, acetylation, formylation, and nitration of 2,2'-biselenophene (II) is studied; electrophilic attack is facilitated at the 5- and 5'-positions. The transmission of electronic effects across 2 selenophene rings is examined
IT **6239-48-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



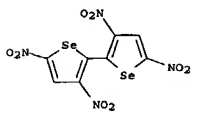
L4 ANSWER 58 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1966:412147 CAPLUS
DOCUMENT NUMBER: 65:12147
ORIGINAL REFERENCE NO.: 65:2204a-c
TITLE: Synthesis of chlorinated pyrylium salts
AUTHOR(S): Roedig, A.; Schlosser, M.; Renk, H. A.
CORPORATE SOURCE: Univ. Wuerzburg, Germany
SOURCE: Angew. Chem. Intern. Ed., Engl. (1966), 5(4), 418-19
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Chlorinated pentadienals and pentadienones (I) gave complex pyrylium salts (II) when warmed with Lewis acids 10-15 hrs. at 40-50°. The compds. thus prepared are given in the table. Decompn; R, R', Anion, point, %Yield; Cl, H, SnCl6-, 1701-1.5°, 87; 27.6; H, H, FeCl4, 155-60°, 13; Cl, Ph, SnCl62-, 177-83°, 40.9; SnCL6-, 176-80°, 17.2; Ph, H, SnCl6-, 118-20°, 60; Ph, Ph, FeCl4-, 219-22°, 52; SbCl6-, 128-33°, 28.9; ClO4, 240°, 20;
IT **6239-50-5, 2,2'-Biselenophene, 3,3'-dinitro- 6239-51-6, 2,2'-Biselenophene, 5,5'-dinitro- 6239-52-7, 2,2'-Biselenophene, 3,3',5,5'-tetranitro-**
(preparation of)
RN 6239-50-5 CAPLUS
CN 2,2'-Biselenophene, 3,3'-dinitro- (7CI, 8CI) (CA INDEX NAME)



RN 6239-51-6 CAPLUS
CN 2,2'-Biselenophene, 5,5'-dinitro- (7CI, 8CI) (CA INDEX NAME)

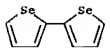


RN 6239-52-7 CAPLUS
CN 2,2'-Biselenophene, 3,3',5,5'-tetranitro- (7CI, 8CI) (CA INDEX NAME)

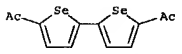


L4 ANSWER 58 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L4 ANSWER 59 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1966:412146 CAPLUS
DOCUMENT NUMBER: 65:12146
ORIGINAL REFERENCE NO.: 65:2203h,2204a
TITLE: 2,2-Bis(selenophene-yl)and some of its derivatives
AUTHOR(S): Chierici, Luigi; Dell'Erba, Carlo; Guareschi, Alessandro; Spinelli, Domenico
CORPORATE SOURCE: Univ. Genoa
SOURCE: Ric. Sci., Rend., Sez. A (1965), 8(6), 1537-9
DOCUMENT TYPE: Journal
LANGUAGE: Italian
GI For diagram(s), see printed CA Issue.
AB The title compound, m. 49°, was prepared in 76% yield by refluxing 1 mole 2-iodoselenophene in xylene with 3.5 g. atomic activated Cu 8 hrs. In analogous manner the following I were obtained (substrate, reaction time, R, m.p., and % yield given): 2-iodo-5-acetylselenophene, 12 hrs., 5,5'-(AcO)2, 221°, 55; 2-bromo-3-nitroselenophene, 12 hrs., 3,3'-(NO2)2, 203°, 70; 2-iodo-5-nitroselenophene, 12 hrs., 5,5'-(NO2)2, 262°, 35; 2-bromo-3,5-dinitroselenophene, 8 hrs., 3,3',5,5'-(NO2)4, 184°, 75. Uv spectra were tabulated.
IT **6239-48-1**, 2,2'-Biselenophene
(derivs.)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)

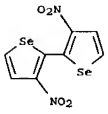


IT **6239-49-2**, 2,2'-Biselenophene, 5,5'-diacetyl- **6239-50-5**, 2,2'-Biselenophene, 3,3'-dinitro- **6239-51-6**, 2,2'-Biselenophene, 5,5'-dinitro- **6239-52-7**, 2,2'-Biselenophene, 3,3',5,5'-tetranitro-
(preparation of)
RN 6239-49-2 CAPLUS
CN 2,2'-Biselenophene, 5,5'-diacetyl- (7CI, 8CI) (CA INDEX NAME)

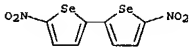


RN 6239-50-5 CAPLUS
CN 2,2'-Biselenophene, 3,3'-dinitro- (7CI, 8CI) (CA INDEX NAME)

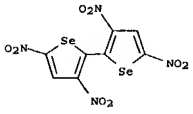
L4 ANSWER 59 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



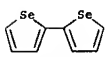
RN 6239-51-6 CAPLUS
CN 2,2'-Biselenophene, 5,5'-dinitro- (7CI, 8CI) (CA INDEX NAME)



RN 6239-52-7 CAPLUS
CN 2,2'-Biselenophene, 3,3',5,5'-tetranitro- (7CI, 8CI) (CA INDEX NAME)



L4 ANSWER 60 OF 60 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1966:412145 CAPLUS
DOCUMENT NUMBER: 65:12145
ORIGINAL REFERENCE NO.: 65:2203g-h
TITLE: 3,6-Dichlorocarbazole
AUTHOR(S): Lopatinskii, V. P.; Zherebtsov, I. P.; Vereshchagina, S. K.
CORPORATE SOURCE: S. M. Kirov Polytech. Inst., Tomsk
SOURCE: Metody Polucheniya Khimicheskikh Reaktivov i Preparatov (1964), No. 11, 56-7
CODEN: MPRPAT; ISSN: 0539-5143
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB 3,6-Dichlarocarbazole (I) is obtained by the action of SO2Cl2 on carbazole in CHCl3 solution; 32% yield, m. 203-5° (HOAc, EtOH).
IT **6239-48-1**, 2,2'-Biselenophene
(derivs.)
RN 6239-48-1 CAPLUS
CN 2,2'-Biselenophene (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **6239-49-2**, 2,2'-Biselenophene, 5,5'-diacetyl-
(preparation of)
RN 6239-49-2 CAPLUS
CN 2,2'-Biselenophene, 5,5'-diacetyl- (7CI, 8CI) (CA INDEX NAME)